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DECEMBER 1956

THE MAGAZINE OF TASTE AND SCENT

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DECEMBER 1956

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Editorials . . .

The Iron Cheek . . .

Government bureaus frequently become overzealous. If such a bureau deals with sensitive information it tends to keep the information classified for a longer time than its importance warrants. Then a ludicrous situation occurs when the bureau refuses to release information while a popular magazine runs an article on it. This is not because the magazine violates security measures. It is because government bureaus at times tend to take onto themselves a greater importance than their activity merits. They may want to overimpress their importance on legislators and the public. They may want to retain manpower. They may act arbitrarily at those times an editorial in the Monthly Bulletin of DiCyan & Brown points out.

The Moss committee was set up to investigate this abuse. It plans to put the informational aspect of government activity on an equilibrium. That is a good step. The danger lies in the feeling that may be engendered in which an over-reaction of the problem occurs. Thus a movement may result to make public more information than is wise for security. Barring unnecessary restrictions on nonclassified information—which now exist—the editorial holds, the iron curtain of scientific information should be drawn tighter.

Cooperative Advertising . . .

Cooperative advertising by manufacturers with retailers is a practical method of increasing the retailer's sales of a particular brand and it does serve to raise a product's prestige. However, contrary to general opinion, there are situations where it may not be the cheapest way of getting the sales message to an entire market.

Take New York City for example. The largest store in the city, R. H. Macy & Co., does about 2 per cent of the entire New York City volume. Others do less of course. Therefore manufacturers who advertise through a retailer reach only the percentage of the market which the particular store controls. By comparing the retailer's market with the entire market in a city for a particular product a more realistic idea may be had as to costs. In communities where brands have wide distribution, the more costly national advertising may be the least expensive method.

Ethics for Package Designers . . .

A code of ethics has been adopted by the Package Designers Council. It requires that a package designer be qualified to provide his client with creative designing, technical guidance and merchandising counsel. Moreover it assures respect for confidential data, it describes terms of payment, it recommends written designer-client agreements and it outlaws speculation and paid advertising. By defining the responsibilities of the designer to the consumer and to industry and by establishing standards of practice within the profession, the Package Designers Council has taken a step to raise the standards of professional practice in a field on which the cosmetic and its allied industries are depending more and more for skilled service.

Old Products Reappear . . .

There are cycles in products and trends just as there are in fashions. In very recent years trading stamps have come back as a retail merchandising promotion after a Rip Van Winkle sleep of well over 20 years. In the cosmetic field solid perfume and solid colognes, cream shampoos, the so-called "cake make-up" as well as other cosmetics all made their initial bow years ago and then were lost sight of until they again appeared on the market in recent years. If one waits long enough it is probable that any product or trend will come back—very likely with increased vigor.

What Is Morale? . . .

One hears a lot about the importance of morale in a business organization. What is morale? It involves pride in oneself as a worker, pride in the job, pride in the product, pride in the company and probably also pride in the community. In a business where morale is high there is a feeling among employes of "working with" rather than "working for" the company. It may be defined as a spirit of mutual loyalty—a spirit of give and take.

The attitude of employes towards their jobs, toward the management and toward their company has an influence on the success of any business enterprise. If a company hasn't the respect of its employes it is difficult for it to promote good will for itself; for everywhere the employes—or former employes—go, they make contacts and what they report may hurt or help the company in unsuspected ways. What they say may become a potent force in creating admiration for the company that employs them, provided they are convinced that their company is trying to be fair.

Too Many New Products? . . .

As a result of the emphasis on research to develop new products a situation is developing where obsolescence is fast becoming the No. 1 problem of manufacturers. Too many new products or old products with more or less minor changes from the same company are appearing too often. Despite the talk about new products and the large percentage of sales of products unknown a few years ago, it is always wise to keep a close watch on the older, time-tried products. In this connection the experience of E. I. duPont deNemours & Co., which spends millions of dollars on research and the development of new products, is not without significance. Its sales last year of products brought out in 1946 were double the volume of sales of the same products in the year they were introduced. Moreover only 27% of all of its 1955 sales—including the widely known synthetic fabrics—were of post-war products. Change is warranted when it is definitely change for the better.

Hello, Sir, this is Norda.

You'll soon be seeing everyone, so maybe you'll please tell
all the friends we can't see that we hope
their holidays are as happy as they have helped make ours this year.
Thank you, sir, and the Season's Best to you, too, sir.

Norda *makes good scents*

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VERONOL

An Aldehyde of great potency; imparts the aldehydic top note to perfumes to which it is added. It is extremely valuable as a modifier. Used from 1/10 to ¼ of 1%.

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An Acetal, ideal for all rose type compounds, because of its fine character, great lift and extreme stability.

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LAST MINUTE NEWS . . .

Deodorizing Door Keeps Cooking Odors from Spreading in House

The Georgia Pacific Plywood Co., Olympia, Wash. has acquired the patent (No. 2,771,021) of James J. Nuckley of Scarsdale, N.Y. for a deodorizing door to confine cooking odors to the kitchen. On the kitchen side of the door the lower panel contains an absorbent pad covered by a screen. The pad can be saturated with a liquid deodorant conveying an agreeable fragrance. Near the bottom of the door toward the living rooms are open channels leading upward and inward to the pad. Air currents, especially those caused by opening and closing the door, help disseminate the fragrance from the pad.

India-Born Sikh Elected to Congress over Jacqueline Cochran

The first native of India to be elected to Congress is Dalip Singh Saund, Democratic Representative elect from the 29th Congressional District of California, who won his election by 3,188 votes over millionaire cosmetic manufacturer and aviatrix Jacqueline Cochran. Mr. Saund is a fertilizer dealer and a justice of the peace in the town of Westmoreland. He came from a prosperous agricultural family in Amritsar, Punjab. He was educated in a university in India and took a Ph.D. degree in 1919 from the University of California. His wife was born in Massachusetts. Jacqueline Cochran in private life is Mrs. Floyd Odlum, wife of the financer. Mrs. Odlum was one of six candidates for the Republican nomination. While she won the nomination, dissension in the Republican ranks probably led to her defeat.

Negro Owned Cosmetic Company to Launch $1,000,000 Promotion

Apex Beauty Products, Atlantic City, N. J., manufacturers of hair cosmetics and pressing oils, plans to spend $1,000,000 in an advertising campaign in the next 15 months. This is believed to be the largest budget ever undertaken by a Negro owned and managed company.

T. G. A. Plans Annual Convention at a Resort Hotel

As soon as satisfactory arrangements can be made, an annual convention of the Toilet Goods Assn. is to be held at a resort, directors of the T. G. A. decided at the October 25 meeting. Since then the association has sent out questionnaires to the members. The resort convention would not include the meeting of the Scientific Section which will continue to be held in New York.

Procter & Gamble Co. Second Among 100 Leading National Advertisers

Advertising expenditures in magazines, Sunday newspaper supplements and network television for the six months period from January to June of this year showed that General Motors Corp. was the largest advertiser in this classification with an expenditure of $31,209,638. Procter & Gamble Co. was second with $27,297,369; Colgate-Palmolive Co. was fourth with $14,608,139; Lever Bros. Co. was twelfth with $7,880,913; Bristol Myers Co. fourteenth with $7,000,164; Revlon thirty-seventh with $2,933,917; Mennen Co. sixty-third with $1,712,-346; Andrew Jergens Co. seventy-ninth with $1,385,142; Chesebrough-Ponds eighty-second with $1,357,618; Hazel Bishop Inc. eighty-third with $1,270,827; and Lehn & Fink Products Co. ninety-first with $1,184,154.

Block Drug Co. to Run Maryland Pharmaceutical Co. as Affiliate

Block Drug Co., which purchased the Maryland Pharmaceutical Co., manufacturer of Rem and Rel cough medicines, will operate the latter as a wholly-owned affiliate. Glen Holder, president of Maryland Pharmaceutical Co., will continue in that position. Leonard Block and Aaron Weinstein, vice president and secretary respectively of Block, have assumed similar positions with the Maryland Pharmaceutical Co.

Over 16 Million Teen-agers Have about $9 Billion to Spend

Cosmetic manufacturers in recent years have devoted more attention to the teen age market and it is likely that this interest will be increased. A study of teen age purchasing power by Eugene Gilbert & Co. for the American Newspaper Publishers Assn. shows that there are more than 16 billion teen-agers with $9 billion to spend annually, either in the form of allowances or earnings, or both.

Apex Which Bought Elmo Co. Developing New Products

Apex Beauty Products Co., which recently bought out Elmo Co., North Philadelphia, manufacturers of women's cosmetics, is developing a new series of products which are being market tested in three large Southern cities. The new products will be introduced early in the coming year. Apex Beauty Products was founded by Sara Spencer Washington, an authority on Negro hair problems. Miss Washington died and the business was continued by relatives. It includes a system of Apex schools of beauty culture.

Purdue University will Offer Packaging Course in Trade Paper

Purdue University is to present a packaging course for college credit in the pages of *Industrial Packaging* in the near future. This is the first known use of a trade publication for actually presenting a technical college course for credit. Prospective students will enroll through a form to be inserted in the magazine and will pay a nominal fee for the course. They will submit to quizzes and problems each month, and on passing a final examination will be awarded a graduation certificate. The lessons, which will be printed in the magazine, will be prepared by members of the Purdue faculty with advice and cooperation from an advisory board made up of executives from leading companies supplying materials, machines and services in the packaging field.

Fitch Sales Strategy Winning Back Big Share of Shampoo Market

Fitch Dandruff Remover shampoo, which was purchased seven years ago by Grove Laboratories, is on the way to recovering the large share of the market it formerly held in the field. The advent of Drene and Halo shampoos with million dollar budgets overshadowed Fitch. Advertising men studied the problem and worked it out from a new angle. As Fitch was a special purpose shampoo, it wasn't necessary to push it during the warm weather months because shampoos generally reach their sales peaks then. However, dandruff is a year round problem, so in order to make a relatively small appropriation make a bigger impression, advertising was concentrated into periods when competitors were relatively quiescent. This was the start of Fitch's off-season strategy. As research indicated that hot, stuffy rooms and tight hats increase dandruff, the next angle was "Winter Time Dandruff." The new Fitch formula not only guaranteed to remove dandruff with the first lather, but the advertising emphasized that it brightened hair up to 35%. Network TV advertising was employed and sales have been steadily mounting.

Bymart-Tintair to Introduce New Women's Hair Grooming Products

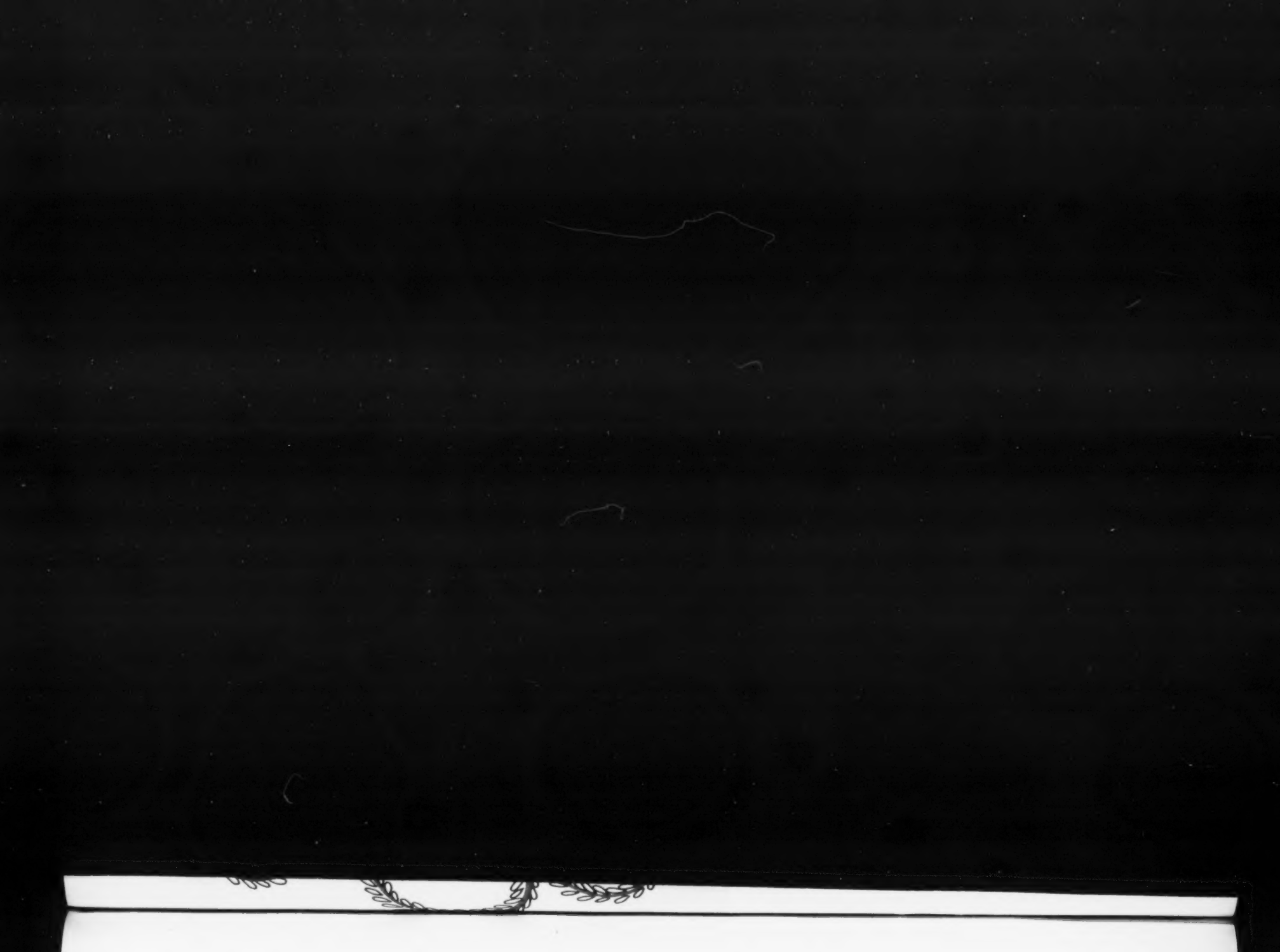
Bymart-Tintair is to introduce two new women's hair grooming products early in the coming year: Ten Day Beauty Set Shampoo and Ten Day Beauty Set Conditioning Creme. Mail order testing on television has been conducted in 50 markets. An appropriation of $1,150,000 has been made to promote the new products.

New Incense Briquette Said to be More Efficient than Usual Cone

The Hindu Incense Manufacturing Co., Chicago, has patented an improved incense briquette that is said to be 40 to 50% more efficient than the usual solid cone. Victor J. Miszeike, the inventor in the patent, No. 2,770,854, relates that new product is a hollow cone with open slots at the bottom.

Max Factor Starts Division to Expedite New Products

Max Factor & Co. has established a new division to expedite the development of new products and more efficiently coordinate packaging changes of established products. It is known as the Project Development Division. Philip Libson has been named manager.



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- Salicylic Acid, Technical—*crystals*
- Salicylic Acid, H Powder
- Sodium Salicylate, U.S.P.—*Flo Crystals®, powder*
- Potassium Salicylate—*powder*
- Methyl Salicylate, U.S.P.
- Phenyl Salicylate, N.F. (Salol)—*granular*
- Acetylsalicylic Acid, U.S.P.—*crystals, powder*
- Acetylsalicylic Acid—*starch granulations*

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aromatic chemical
musk-tonkin type
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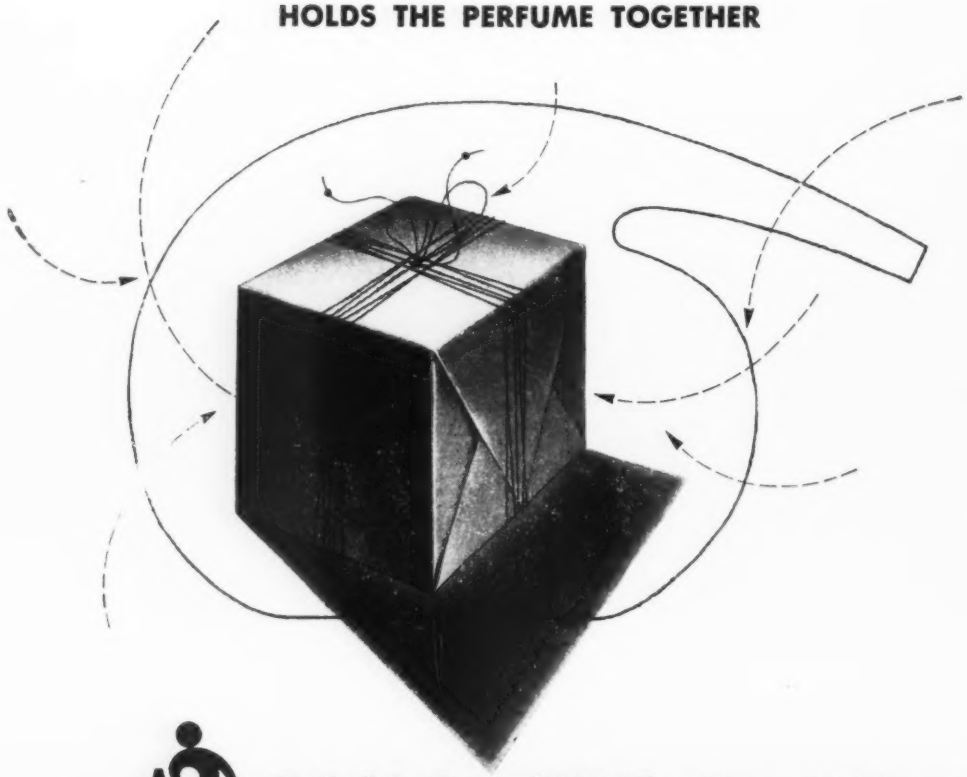
HOLDS THE PERFUME TOGETHER



Polak's Frutal Works, Inc., Middletown, New York

*Domestic and Foreign Patents applied for.

DESIDERATA

Maison G. deNavarre, F.A.I.C.

Lipstick Turn About

There have been a number of us who have for several years reasoned that the deep stain or long lasting lipstick wasn't too good for the lips. It has been a losing battle. I, for one, still think the ensuing dryness, peeling, blisters and occasional swelling that have and do occur, don't help lipstick sales, nor do they help cosmetic industry good-will, in the *long run*.

Well, guess someone in lipstick management for one reason or another agrees in part. For a *new* lipstick is to be launched. It will be the old, reliable, creamy type containing "no harsh solvents, no indelible dyes" and "no irritating perfumes." Also it has a new twist in that it will contain a patented healing ingredient.

All this is not so exciting except that the company about to plug this *new* lipstick was a strong plugger of the deep stain and long lasting lipstick for years. The merry-go-around has come back to its starting point. Now I wonder *what* women will believe.

On Europe

An observation that repeated itself in every country my wife and I visited in Europe recently was that many U. S. (so-called American) brands of cosmetics have become very well entrenched in foreign markets. Most aerosol cosmetics were of U. S. origin. The only different thing in this field was the Vapsol re-use valve, an Italian invention.

Our cosmetics are somewhat higher priced by comparison to local products, particularly if imported, as so many were.

Some Continental European women feel that U. S. cosmetics were "purer" and therefore, "safer" in their minds. The reasons offered were nebulous. People not in the cosmetic industry but who were "related" to the industry by family or vocation, particularly reflected this feeling. So it seems to me that the cosmetic industry in Europe has a selling and good-will program to do on their own products.

Furthermore, any French perfumes I need in the future will be bought here. You don't have to lug them around and possibly run afoul of customs (due to the neat trick pulled by so many French perfume companies limiting duty free purchases to one package or bottle). I fail to see any real savings in buying them abroad.

Low priced lipsticks in the Low Countries were packed in unique plastic containers.

Another outstanding thing about this trip was the gracious hospitality and most cordial reception we received everywhere we went. We found *all* the Europeans to be very friendly. They just couldn't seem to do enough for us. It was nothing, seemingly, to drive us a 100 kilometers to help us make better plane connections or to go 75 kilometers for dinner. We saw many people at their homes and joined in the family life.

We saw lots of industrial activity and were impressed by some of the new things being made.

Europe was an education to us. Hope we can do it again and again.

New Cosmetic Contaminant

At a meeting of the Symposium International des Parfums Synthetique et Naturels et de Cosmetologie held in Paris on December 1st and 2nd, deNavarre and Bailey presented a paper (in absentia) entitled, "Paecilomyces, A New Contaminant of Cosmetic Preparations," Part III of a series on the inactivation of preservatives by nonionic emulsifiers. The mold *Paecilomyces* at first glance can be confused with *Aspergillus* or *Penicillium*. It is the first time this mold has been reported as a cosmetic contaminant.

Emulsions and Heat Loss, Etc.

During the Society of Cosmetic Chemists' Seminar last October, Bolanowski gave a paper on the use of the "Votator" in cosmetic production.

This machine though overcoming many vexing problems of production cannot be used by the host of small manufacturers. However, the author stresses the following points

Folia

(un absolu des eaux)

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Bertrand Frères, Inc.

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Paris, 12 Rue Leon Jost

as being exceedingly important to product uniformity.

(1) formulation
(2) degree of mechanical work
(3) holding time in process
(4) temperature gradient

By varying the last factor, either a thick or thin product is obtained.

Since the Votator is a mixing and heat exchange unit, Bolanowski concentrates on the temperature factor. But in my opinion, he can't stress it too much. In fact a 'phone conversation with a production man, held during the writing of these words, just disclosed that a gallon quantity of a 45 gallon batch, cooled quickly in the lab, had a desirable viscosity while the 44 gallons remaining were "thin as water."

I have seen this happen many times, where factors 2, 3 and 4 are varied. So, when this paper is published, it is strongly recommended reading for all cosmetic chemists and production men.

Notes

Propellent suppliers are preaching a cautious note on getting into the "private label filling" business. . . . So often, one product makes or breaks a company. It will be interesting to see who is the largest cosmetic manufacturer in the world at year end. . . . Now that there are several suppliers of a liquid lanolin, many new uses will be found for it. . . . While in England, picked up a first hand observation from a user of an originally British made ultrasonic homogenizer—confirms what was written about it here some years ago—but serves a purpose like a colloid mill. . . .

Soap and Detergent Sales

The first nine months in 1956 tonnage sales of soaps and synthetic detergents registered a nine per cent increase over last year's sales during the same period, according to a survey conducted by the Assn. of American Soap & Glycerine Producers, Inc., among seventy-four participating companies. Reported combined sales were 3,053,796,000 pounds valued at $702,203,000 as compared with 2,804,005,000 pounds and $656,649,000 for nine months in 1955. Synthetic detergent sales amounted to $460,640,000. Sales of soaps, solid and liquid, for this period totaled 989,289,000 pounds valued at $241,563,000, were off 6 per cent in tonnage and 3 per cent in dollar sales.

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(Aluminum Chlorhydroxide Complex)

Actually custom-made to fit every anti-perspirant formula

EASIEST TO INCORPORATE IN YOUR ANTI-PERSPIRANT PRODUCTS

Chlorhydrol's availability in 5 forms—

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- IMPALPABLE
- 50% W/W SOLUTION

—makes it easy to introduce into almost any anti-perspirant formulation...

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Only Chlorhydrol, among anti-perspirant astringents, offers all 7 of these advantages—

- mild acidity
- effective anti-perspirant action
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- excellent astringent qualities
- needs no buffering
- causes no skin irritation
- non-destructive to fabrics

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WAVEMASK 30

works magic with home permanents

The new Synfleur fragrance WAVEMASK 30 can help cure even your most difficult case in home permanent formulation.

WAVEMASK 30, based on essential oils and aromatic chemicals, carefully tested for stability, compatibility and solubility, is an artistic formulation developed out of long and intensive Synfleur research.

In practical application, it has proven itself as practically a panacea to cold wave preparation odor problems. Additionally, it can be adapted as a basic fragrance for effective use in other thioglycolate products requiring similar masking treatment.

The Synfleur laboratories staff will be glad to assist you on your masking problems with samples, data or other help, without obligation.

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QUESTIONS & ANSWERS

1216: BROMATE SOLUTION THICKENERS

Q. *Your answer to Question No. 1182 mentions a thickener suitable for either sodium or potassium bromate solutions. We would like to know the names of such thickening products which might be added safely to potassium or sodium bromate solutions intended as neutralizer solutions. C. T. C., Michigan.*

A. The Van Dyk Co. and Perry Brothers, Inc., manufacture a number of emulsifiers and thickeners for sodium or potassium bromate solutions, which are used as cold neutralizers for permanent waving.

1217: EYEGLASS CLEANER

Q. *Our problem is to prepare an eyeglass cleaning solution, the kind that you put 2 or 3 drops on a lens then wipe off clean with a soft cloth. We would appreciate any help you can offer us with the problem. E. N. C., New York.*

A. The type of eyeglass cleaner for which you are looking usually consists of a dilute solution of soap, containing something like 3 to 5 per cent of soap at the most, usually an ammonium soap, tinted with fluorescein. To this is added not over 5 per cent of propylene glycol or glycerin. A couple of drops of this mixture on the eyeglass wipes off clean and keeps the glass bright even to the point of preventing fogging.

1218: SILICONE APPLICATION

Q. *We have been referred to you by the chief chemist of* Good Housekeeping *for information in connection with the application of silicone and how it should be included in a hand lotion formula. We manufacture hand lotions and creams, the main basis of which is avocado oil and lanolin and feel that after reading the information in the March, 1956, issue of* Good Housekeeping, *the inclusion of silicone would improve our products. W. C. M., Australia.*

A. We do not have very much to suggest except a formula published by Tajkowski in December of 1953. This formula for a hand cream is as follows:

(A). Hystrene T-70 Fatty Acid, 15%; Isopropyl Palmitate, 2%; General Electric Silicone Fluid SF-96 (1000 centistokes) 10%. (B). Potassium Hydroxide, 1%; Sorbo, 18.3%; Water, 53.7%; Preservative, q.s. (C). Perfume; q.s. Preparation: Heat A to 80° C. Heat B to 82° C. Add B to A slowly under continuous agitation. Continue agitation to 45-50° C. Perfume and pack.

Hystrene is a 70 per cent stearic acid. The isopropyl palmitate is equivalent to Deltyl by Givaudan. Sorbo is a 70 per cent solution of sorbitol in water, so-called sorbitol syrup. The Silicone Fluid is obtained from the General Electric Co. If this formula is reduced in total solids to approximately one-fourth of its present contents, and the water increased in like proportion, then you should get a fairly thick but eminently suitable hand lotion. On the other hand, should you have a satisfactory hand lotion then the addition of 10 per cent of a silicone fluid, such as the SF-96 of General Electric, should give you the product you want.

1219: NAIL POLISH ARTICLE

Q. *We have noted your mention of "Nail Polish Analysis" in the* AMERICAN PERFUMER *and should like to read the article. However, we cannot procure it and wonder if you would be kind enough to order it from the publishers and have them sent to us cash on delivery. J. E. L., Sweden.*

A. We are obtaining photostatic copies of the nail polish analysis article requested in your letter. As soon as we receive this we will mail it to you. There is often a delay of approximately forty-five days in getting this because we have to get it from the Library of Congress. When the article comes through, we will know the charges and in turn will inform you.

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BASIC PRINCIPLES OF GAS PARTITION CHROMATOGRAPHY

CHARLES L. TEITELBAUM, Ph.D.*

CHEMISTS all over the world are discussing the development of gas chromatography, one of the most exciting advances in analytical chemistry in recent years.[1] The petroleum and chemical industries are hailing it as the most revolutionary and useful development since infrared spectroscopy became widely available.[2] There is every reason to believe that gas chromatography will be just as significant in the analysis of volatile materials used in the cosmetic and flavorings industries, particularly essential oils, flavorings and perfumery materials. The purpose of this article is to review the basic principles of this new analytical technique and to indicate, in a very general way, its applications to the essential oil and cosmetic industries.

In general, chromatography[3] is the process in which a mixture of compounds is passed through a stationary bed of solid material which interacts to varying degrees with the components of the mixture. In its most familiar form, the stationary bed of solid consists of a tube containing a material such as silica gel, alumina or carbon. The mixture to be separated is poured on top of the column and a solvent is passed through the column. There is an attractive force between the components being carried through the column by the solvent and the surface of the stationary solid called adsorption. This attractive force tends to retard the passage of the components through the column. The components that are adsorbed most strongly will be slowed up more in their passage through the column than the less strongly adsorbed components. If these differences are sufficient, a complete separation of the components is possible. Recovery of the separated components is most commonly achieved by elution, the passage of sufficient solvent through the column to wash all the components from the solid adsorbent. As each component emerges from the column it is collected and analyzed.

Another means of achieving this type of separation is partition chromatography.[4] This involves the use of a solid coated with a liquid insoluble in the eluting solvent, an "immobile" liquid. In this case, the separation is achieved on the basis of solubility differences of the components of the mixture in the immobile liquid and the eluting solvent. This property is called the partition coefficient. Using a column of solid wetted with an immobile liquid, partition chromatography works analogously to adsorption chromatography. A variation of the partition technique which has been very successful in certain fields is paper chromatography, in which a sheet of paper with its natural content of water acts as a partition chromatography column.[5]

The specific technique which we are considering here is the application of the partition method to the chromatography of gaseous materials. In handling materials in the gaseous state, a carrier gas, generally helium, is substituted for the eluting solvent so that the immobile liquid need only be non-volatile at the temperatures to be used. In other ways the method of operating a gas

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chromatograph is quite similar to that of a liquid chromatograph although the types of separations obtained are strikingly different.

Elements of a Gas Chromatographic Apparatus

There are basically three parts of a gas chromatograph, or indeed, of any chromatographic apparatus. These are the sample introduction system, the column, and the detection and collection system.

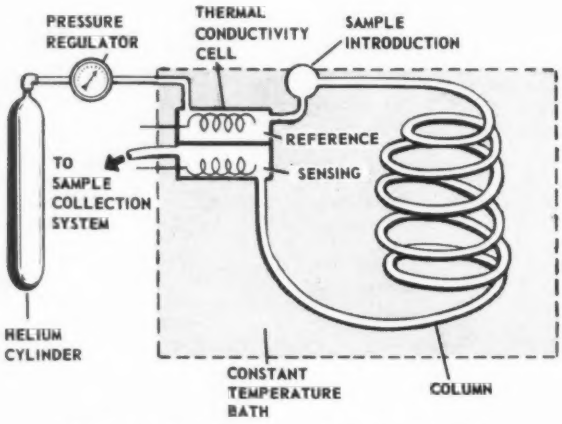


Figure 1. Schematic diagram of gas chromatograph.

Sample Introduction System. The problem of introducing the sample varies according to whether the sample is a liquid or gas at room temperature. In either case, it is desirable to inject the sample as quickly as possible. Obviously if the sample is introduced very slowly it will not be possible to separate compounds traveling through the column at only slightly different speeds. The readily apparent effect will be to broaden the chromatographic peaks as registered by the detection system. For liquids, the sample is usually injected by means of a hypodermic syringe through a rubber serum cap into the flowing gas stream. It is preferable to provide a flash heater to insure rapid volatilization of the liquid.

Chromatographic Column. Since the sample is in the gaseous state when it reaches the column, it is not necessary to maintain the column in a vertical position. The columns are filled in a vertical position to insure uniform packing of the solid in the column and then usually coiled for compactness. In this way, it is possible to conveniently use columns 25 feet or longer even though a constant temperature environment is required. The required temperature control is mostly commonly provided by an air bath which may be varied from below room temperature to 200°C or higher.

The most important variable in the operation of a gas chromatograph is the choice of column packing. As stated previously, the packing consists of an inert solid coated with a non-volatile liquid. Some variations in performance can be obtained by choice of solid,[6] although the most startling changes in performance can be obtained by varying the nature of non-volatile liquid.[7] In the gas partition technique, there are two different effects which govern the rate of movement of compounds through the column. The first is the volatility of each component, which will tend to move components through the column in order of decreasing volatility. This effect operates analogously to a distillation. In addition, there is an associative or solution effect. This tends to slow down the passage of any compound which associates highly with the immobile liquid, or, to put it another way, is highly soluble in the immobile liquid. As a guide to predicting the nature of this effect, we may use the familiar rule of thumb, "like dissolves like." Thus, if one had failed to separate a mixture of an aromatic and an aliphatic compound, such as phenylethyl alcohol and linalool on some non-associating immobile liquid such as a silicone oil, the obvious next step would be to use an aromatic immobile liquid such as terphenyl or tricresyl phosphate. One would predict that the phenylethyl alcohol would associate much more strongly with the immobile phase and thus be retained sufficiently longer to be separated from the linalool. While there are limitations, based largely on volatility and heat stability, which govern the choice of compounds as immobile liquids, there is a large and constantly growing number to choose from. In order to increase the flexibility and efficiency of gas partition chromatography, there is a great need for not only more and better immobile liquids but a more systematic means of choosing the most suitable one for a particular problem.

Detection and Collection System. One of the most serious limitations of liquid chromatography is the lack of a simple and generally useful method for detecting and measuring the appearance of the various fractions in the column effluent. In the case of colored fractions, visual observation is an obvious and effective means for detection and it can easily be made quantitative by spectrophotometric measurement. For colorless compounds, however, no generally useful physical measurement has been found which can analyze the effluent fractions for the low concentrations of eluted compounds which are usually encountered.

The most common detection method for gas chromatography makes use of the fact that helium has a higher thermal conductivity (i.e., conducts heat more rapidly) than any other gas except hydrogen. The thermal conductivity cell consists either of a platinum wire or a thermistor suspended in the gas stream and heated by a constant electric current. The temperature of the heated wire or the thermistor will depend on the rate at which heat is conducted away from it. In the case of a wire surrounded by a gas, this varies with the thermal conductivity of the gas. Thus, any change in the thermal conductivity of the gas emanating from the column can be measured and recorded by suitable means. Since all the materials we are concerned with have a much lower thermal conductivity than the carrier gas, helium, the appearance of a fraction will cause a rise in the temperature of the detector, causing a peak in the recording. In practice the thermal conductivity meter is a two-cell type. The helium passes through the reference cell, then through the column and finally through the measuring cell. An electronic recorder is used to measure the temperature of the detector, making use of the fact that the resistance of the detector varies with its temperature.

A typical recording is shown in Figure 2. Each peak corresponds to a different fraction of the starting materials and the quantitative or identifying feature is its retention time, the time required for a fraction to pass through the column under a given set of conditions. In favorable cases and with proper calibration with known compounds, the retention time serves to identify the fraction. In many cases, however, identification must be done or at least confirmed by isolation of the fraction and subsequent measurement of other properties. The amount of each fraction is measured by the area under each peak. This can be estimated by a planimeter, or in

the case of symmetrical peaks, by multiplying the height of the peak by the width at half the peak height. In some commercially available machines, an automatic integrator records the area under each peak by a series of "pips" on the recording.

Sample collection can be accomplished by condensing each fraction in a cold trap or absorbing it in a volatile solvent. If large samples are to be collected, it may be advisable to split the effluent stream and pass most of it directly into a trap while passing the smaller part through the thermal conductivity cell for monitoring purposes.

Advantages of Gas Chromatography

In speaking of the efficiency of gas chromatography, for separating mixtures, comparison is usually made to distillation rather than liquid chromatography. This is because gas chromatography handles materials in the same physical state as does distillation and, in general, depends on the same differences in properties (i.e., vapor pressures) to effect separations. On the other hand, liquid chromatography utilizes other differences in properties.

In comparison with distillation, gas chromatography offers a number of advantages. It is possible to separate mixtures of compounds whose boiling points are very close. Using the usual distillation concept of "theoretical plates" to express separation efficiency, gas chromatography routinely gives separations equivalent to 1000-2000 plates. On the other hand, extreme care is required to obtain efficiencies of more than 20 theoretical plates during a distillation, particularly when operating under vacuum. The efficiency of distillation column seldom exceeds 150 plates.

The ease of operation of a gas chromatograph is striking. It is truly one which, as the expression goes, "can be operated by anybody." The time required may range anywhere from 10 minutes to 2 hours elapsed time. Actually, the analyst need only insert the sample then come back when it is done in the case of routine work. These features contrast with the trained supervision and prolonged times required for efficient distillations. In addition, a recording of each analysis is obtained without any additional manipulation.

In terms of sample sizes, gas chromatography can easily handle far smaller quantities than even "micro" distillations. The upper limit of sample sizes that can be conveniently handled by gas chromatography has not been reached; at present this technique has not been used to prepare large quantities of material.

Azeotrope formation, the formation of constant-boiling mixtures which cannot be separated by distillation, are often a troublesome feature of distillation processes. Neither azeotrope formation nor any analogous phenomenon has ever been observed to affect gas chromatography.

The limits on the types of materials which can be handled have not yet been defined. The major limitation involves the volatility of the compounds. A vapor pressure of several millimeters at the attainable column temperatures of up to 275 C is necessary. The highest boiling compound that has been chromatographed in the gas phase is methyl behenate, the methyl ester of the 22 carbon carboxylic acid. It is probable that all perfumery materials with the possible exception of a few fixatives and certainly all materials produced by vacuum or steam distillation should be sufficiently volatile.

The other limitation to be concerned with is that the compounds should be stable at the temperatures involved. We are aided in this regard by the fact the operation is carried out in an inert atmosphere of helium and thus atmospheric oxidation is not a problem, even at the elevated temperatures that may be required.

Applications of Gas Chromatography

Generally speaking, there are two ways one can utilize such an instrument. It can be used as a direct analytical tool in which the thermal-conductivity record is used as a qualitative and quantitative analysis of the unknown. On the other hand, one may use the device as a tool for the isolation of pure compounds. In the latter case, the thermal conductivity record serves largely as a guide to operation of the sample-collection system.

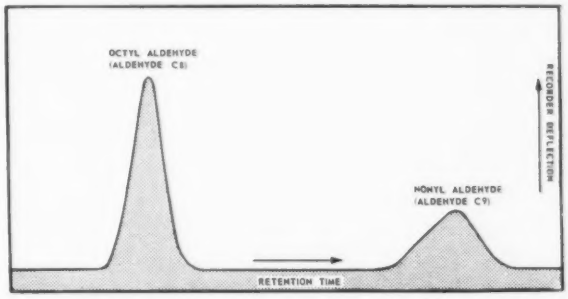


Figure 2. Gas partition chromatography of mixture of octyl and nonyl aldehydes.

Figure 2 is a good example of the use of gas chromatography for direct analysis. The material chromatographed was a mixture of octyl and nonyl aldehydes (Aldehydes C8 and C9). In order to determine the amount of each in the mixture, one need only determine the area under each peak. The accuracy to be expected is of the order of 1 per cent and the entire analysis could be done on a routine basis in less than 30 minutes.

It is possible to isolate the two compounds in a pure state from such a chromatography. This complete a separation would not be possible by distillation, liquid chromatography, or any other means of which we are aware and thus, gas chromatography is a very valuable tool in studies on the composition of essential oils and flavoring materials.

The accuracy of 1 per cent can probably be increased in the case of detection of minor constituents by increasing the amount of sample and/or increasing the amplification of the electronic recording device. Therefore, it would seem to be excellently suited to the detection of impurities or even adulteration in perfumery and flavoring materials.

The simplicity, ease of operation, scope, and efficiency of the new tool indicate the great potentialities it has for the essential oil, flavorings and cosmetic industries.

BIBLIOGRAPHY

1. James, A. T. and Martin, A. J. P., *Analyst 77*, 915 (1952); Griffiths, J., James, D. H. and Phillips, C. S. G., *ibid*, 897 (1952); Phillips, C., "Gas Chromatography," Academic Press, New York, (1956); Jacobs, M. B., *American Perfumer 67*, 73 (1956).

2. Anonymous, *Chem Eng News 34*, 1692 (1956); Podbielniak, W. J. and Preston, S. T., *Petroleum Refiner*, No. 11, (November, 1955); Housdorff, H. H., *Anal Chem*, in press; Barefoot, R. R. and Currah, J. E., *Chemistry in Canada 7*, 5 (May, 1955).

3. Cassidy, H. G., "Adsorption and Chromatography," Interscience Publishers, New York (1951); Lederer, E. and Lederer, M., "Chromatography," Elsevier Publishing, Houston, Texas (1953).

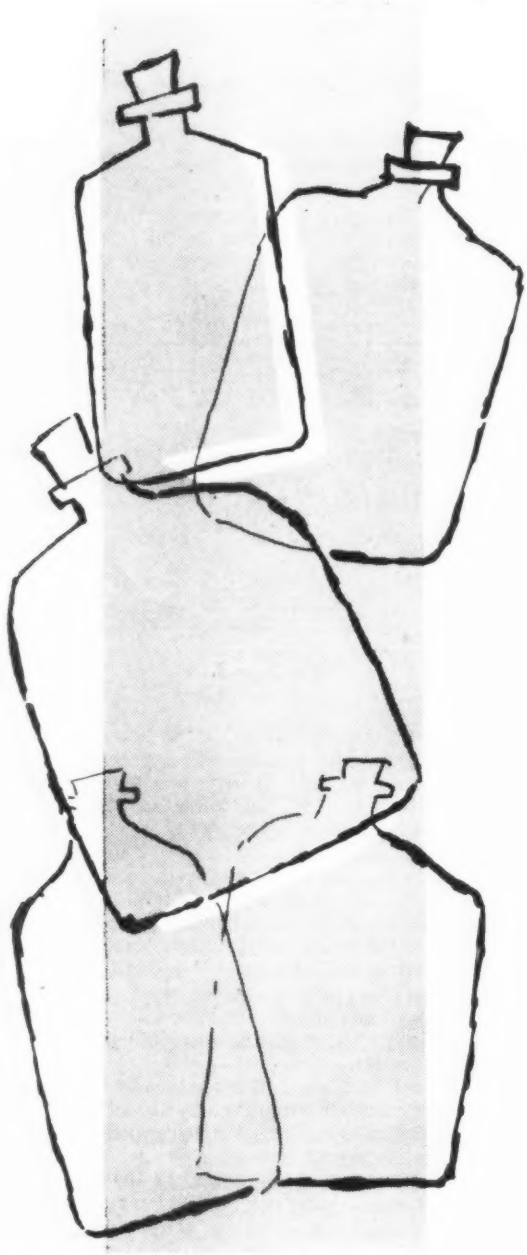
4. Martin, A. J. P. and Singe, R. L. M., *Biochem J. 35*, 1358 (1941).

5. Bloch, P. J., Durrum, E. L. and Zweig, G., "Paper Chromatography and Paper Electropheresis," Academic Press, New York (1955).

6. Dimbat, M., Porter, P. E., and Stross, F. H., *Anal Chem 28*, 290 (1956).

7. Podbielniak, W. J., and Preston, S. T., *Petroleum Refiner*, No. 4, (April, (1956).

8. Cropper, F. R., and Heywood, A., *Nature 172*, 1101 (1953).



A PRELIMINARY

Storage

WE HAVE often been asked the following question: For what length of time can we store our aldehydes? In searching the literature, we found that only general recommendations regarding this problem have been published[1,2,3]. Information such as storage in dim light, in aluminum or glass containers, in full containers, in containers free of heavy metals, etc. has been specified to enhance the stability of these products. However, no storage time vs. stability data under various conditions has been reported. We initiated this investigation with the hope of obtaining information regarding these relationships.

Considering the many types of containers that aldehydes are shipped in, we endeavored to determine if these containers affect the stability of the product. Naturally, a problem of this type could not be approached without taking into account the effect of type of closure of the container, the use of anti-oxidants, the effect of temperature, diluents, and lastly the class of aldehyde involved.

Since many of the aldehydes are produced and purchased in sizeable quantities and stored until needed, the determination of the best optimum conditions for such storage would be advantageous. We investigated the storage of the following aldehydes as examples of the above-mentionel classes: Aldehyde C-9 (n-nonanal) and C-11 (undecylenic aldehyde), phenylacetaldehyde, α-phenylpropionaldehyde (hydratropic aldehyde), β-phenylpropionaldehyde, furfural, benzaldehyde, xylylaldehyde, cinnamylaldehyde and α-n-amyl-cinnamylaldehyde.

We investigated amber and clear soft glass bottles and Pyrex clear glass bottles; container closures consisting of paraffin coated corks, ground glass stoppers, aluminum caps, gelatin caps and multiple type caps (Table I); anti-oxidants such as hydroquinone, Tenox BHA°° (butylated hydroxyanisole), and Tenox BHT°° (butylated hydroxytoluene); temperature effects of +5° and +25° (room temperature); and diluents of a polar character of which phenylethyl alcohol, geraniol and citronellol are examples, and a non-polar type, benzene.

Each analysis was done in duplicate, the average being reported in the following tables and graphs. However, the investigation was performed on only one alde-

°Analytical Laboratories, Polak's Frutal Works, Inc., Middletown, New York.
°°Product of Tennessee Eastman Corp.

INVESTIGATION OF THE

Stability of Aldehydes

ALEX POST* and KATHERINE L. LOCKE*

Sample	Temperature	Type of Bottle	Type of Closure	% Aldehyde 0 Weeks	4 Weeks	8 Weeks	12 Weeks	26 Weeks
Aldehyde C-9	+ 5°	A	Cork	93.8	72.9	57.0	38.1[2]	35.3[2]
"	"	B	Glass	95.0	95.2	96.0	95.2	95.8
"	"	C	"	94.6	96.0	95.5	94.3	94.3
"	+25°	A	Cork	93.4	69.3	68.1	66.2	60.4
"	"	B	Glass	93.7	93.6	92.5	92.3	91.2
"	"	C	"	94.4	95.0	94.6	93.2	92.8
Aldehyde C-11	+25°	A	Cork	92.8	88.8	83.2	74.3	56.4
"	"	B	Glass	93.7	92.1[1]	—	—	—
"	"	C	"	93.0	92.6	94.0	94.2	92.4

Table I—Effect of type of bottle, closure, and temperature on stability of aldehydes C-9 and C-11.*

hyde of a particular type. Although the conclusions are undoubtedly not statistically correct, they are, however, interesting in that a trend for stability or lack of it is apparent.

Experimental Procedure

The aldehyde (4 oz.) were stored in various 4 oz. containers in dim light, with and without diluents and antioxidants, at a specified temperature for a period of 4-26 weeks. At the end of each 4 week period an aliquot was withdrawn and the aldehyde content determined using the following oximation procedure:

Reagents: 1. Approximately 0.5 Normal Potassium Hydroxide in 95% alcohol. Dissolve 405 g of 88% strength KOH pellets in 330 ml of distilled water and dilute to 12.8 liters volume with alcohol 95%. Allow to stand for 3 days and filter through glass wool. Keep in brown colored tightly stoppered bottle.

2. A 0.4% solution of Bromphenol Blue in (95%) alcohol.

3. Hydroxylamine Hydrochloride solution: Dissolve 120 g of $H_2NOH{\cdot}HCl$ in 240 ml of distilled water; add 2.7 liters of (95%) alcohol and add 24 ml of reagent solution 2.

Determination: Weigh out accurately about 6 milliequivalents of the carbonyl compound and transfer to a 125 ml Erlenmeyer stoppered flask containing 5 ml of (95%) alcohol. Pipette into another flask or suitable container exactly 20 ml of solution 1 and then add exactly 22 ml of solution 3. Add this reagent mixture to the sample; and add the rinsings to the flask containing the sample. Mix by swirling and allow aldehydes to stand 1 hour at room temperature. Titrate to a yellow end-point using 0.500 N HCl and back titrate to a yellow-green end-point with 0.500 N NaOH.

Calculation: % of Aldeyde =

$$\frac{\text{Blank} - (\text{Acid} - \text{Alkali}) \times N \times M \text{ Eq. Wt.} \times 100}{\text{Gms} \times 1000}$$

Blank = (ml HCl — ml alkali) used to titrate blank to end-point of Bromphenol Blue.

Acid = ml HCl used to titrate sample to yellow end-point of Bromphenol Blue.

Alkali = ml KOH used for back titration of excess HCl to yellow-green end-point.

N = normality of HCl.

*A = amber soft glass; B = clear Pyrex; C = clear soft glass. 1 = sample spilled; 2 = polymerized; melted prior to analysis.

Sample	Temperature	Type of Closure[6]	% Aldehyde[7] 0 Weeks	4 Weeks	8 Weeks	12 Weeks	26 Weeks
Aldehyde C-9	+25° C	A[1]	95.6	94.3	94.5	95.0	91.8
"	"	B[2]	94.5	94.5	94.8	94.2	91.0
"	"	C[3]	94.5	94.5	93.8	94.6	92.1
"	"	D[4]	95.0	95.0	95.6	95.8	91.3
"	"	E[5]	93.4	69.3	68.1	66.2	60.4

Table II—Effect of amber soft glass container on aldehyde C-9 stability.*

M. Eq. Wt. = milliequivalent weight of aldehyde.
Gms = grams of sample used.

Effect of Temperature. Since Aldehyde C-9 is considered to be a fairly unstable aldehyde, it was investigated for its stability at +5° and +25°. Figure 1 shows that Aldehyde C-9 is more stable at +25° than at +5°, when stored in an amber soft glass bottle with a paraffin cork closure. At the twelve week period, the sample stored at +5° turned solid, confirming previously published information that Aldehyde C-9 polymerizes in the cold[2]. In either case, the stability of this aldehyde under these conditions is extremely poor. However the temperature variable was eliminated if the material was stored in a clear soft glass or Pyrex bottle with a ground glass stopper. Table I.

Effect of Type of Storage Container (Table I).
This variable was deemed to be the most important in our investigation. Not only does the supplier have to store the aldehyde in a container sometimes for several weeks but the customer, as well, often keeps the aldehyde in the container it was shipped in. In both cases, an improper container could cause a great deal of inconvenience.

Both Aldehydes C-9 and C-11 were found to be stable for a six month period when stored in either a clear soft glass bottle or a Pyrex bottle with ground glass closures, or with paraffin coated cork closures, at +25°. When soft glass amber bottles with paraffin coated cork closures were used, the aldehydes deteriorated rapidly. As mentioned above, the use of ground glass stoppered bottles eliminatd polymerization due to low temperatures. It seems likely then that the polymerization may be due to the type of bottle, the type of closure, or both.

Effect of Type of Closure. Previously we observed that Aldehydes C-9 and C-11 stored in soft glass amber bottles with paraffin cork closures deteriorated rapidly (see Figure 1), whereas if a ground glass stopper was used with a soft glass clear bottle, deterioration was practically eliminated during the test period (Table I).

Based on these results it seemed possible that the type of container in itself may be affected by the type of closure used. We, therefore, attempted the evaluation of single and multiple type closures in conjunction with a soft glass amber bottle. Assuming that deterioration was brought about by air leakage through the cork,

[1]1. Paraffined cork plus plastic screw cap; 2. machine sealed aluminum screw cap; 3. hand sealed aluminum screw cap; 4. paraffined cork plus gelatin cap; 5. paraffined cork; 6. a new closure was used after each analysis; 7. absolute value.

Figure 1—Effect of temperature on aldehyde C-9.

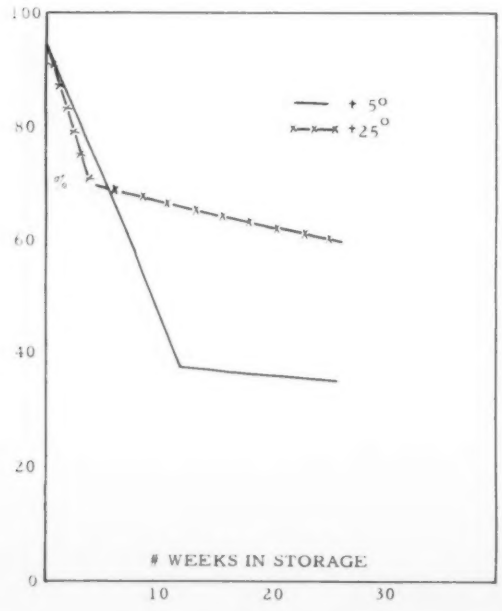
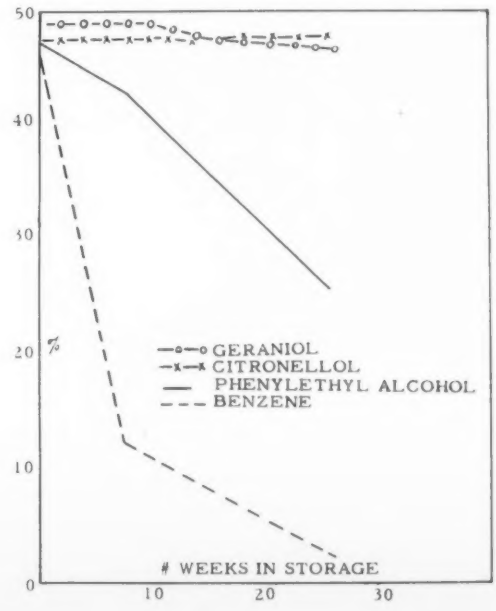


Figure 2—Effect of diluents on aldehyde C-9.



Sample	Anti-oxidant	% ALDEHYDE			
		0 weeks	4 weeks	8 weeks	12 weeks
Aldehyde C-9	———	94.4	93.8	91.4	91.8
"	0.1% BHT	94.3	93.3	91.8	92.3
"	0.1% BHA	94.7	94.0	92.3	91.8
Aldehyde C-11	———	91.1	90.7	89.2	89.4
"	0.1% BHT	90.6	90.4	89.2	89.3
"	0.1% BHA	90.6	90.7	88.3	89.3

Table III—Effect of BHT and BHA anti-oxidants on the aldehydes C-9 and C-11.

we replaced the paraffined cork with Aluminum screw caps, and with multiple closures consisting of a paraffined cork with a plastic screw cap, and a paraffined cork with a gelatin cap. In all cases the aldehydes did not deteriorate during a twelve week period and only slightly at the 26 week period (Table II). One can infer then, that deterioration occurs in a soft glass amber bottle only in the presence of air.

Effect of Diluents. The use of dilute solutions of natural products (tinctures) as stock solutions is standard in the perfumery industry. The flavor and perfume chemist finds it advantageous to have at hand stable dilute solutions of aldehydes. Since information regarding the stability of dilute alcoholic solutions of aldehydes was lacking we decided to investigate this phase of the problem. We investigated the polar diluents such as phenylethyl alcohol, geraniol and citronellol, and a non-polar diluent, benzene. Aldehydes C-9 and C-11, mixed one to one with the diluent, were stored under the most adverse conditions (amber soft glass bottle with cork closure at 25°). From Figure 2 it is evident that excellent stability of Aldehyde C-9 occurred when either citronellol or geraniol were used, fair stability in phenylethyl alcohol and very poor stability in benzene. With Aldehyde C-11 the stability was excellent in the polar diluents and poor in the non-polar diluent (Figure 3).

Effect of Anti-Oxidants (Figures 4 and 5). The use of anti-oxidants for the preservation of many pharmaceutical and food products, as well as essential oils, is well known. However, how applicable are they to aldehydes? Again, using the previously mentioned poorest storage conditions, we evaluated the effect of the anti-oxidants, hydroquinone and butylated hydroxyanisole (Tenox BHA) on Aldehydes C-9 and C-11. The addition of hydroquinone (0.1% by weight) prevented deterioration of the aldehydes for at least a twelve week period; whereas Tenox BHA showed only minor anti-oxidant properties at the four week period.

During this phase of the study, it was of interest to know whether the anti-oxidants Tenox BHA, or butylated hydroxytoluene (Tenox BHT) were necessary to enhance the stability of Aldehydes C-9 and C-11 if stored in clear soft glass bottles with paraffined cork closures at 25°. From the results indicated in Table III, Tenox BHA and Tenox BHT offer no anti-oxidant properties to these aldehydes. It is interesting to note that these aldehydes are more stable under these conditions than those considered in Table I.

Extending the investigation of the incorporation of

Figure 3—Effect of diluents on aldehyde C-11.

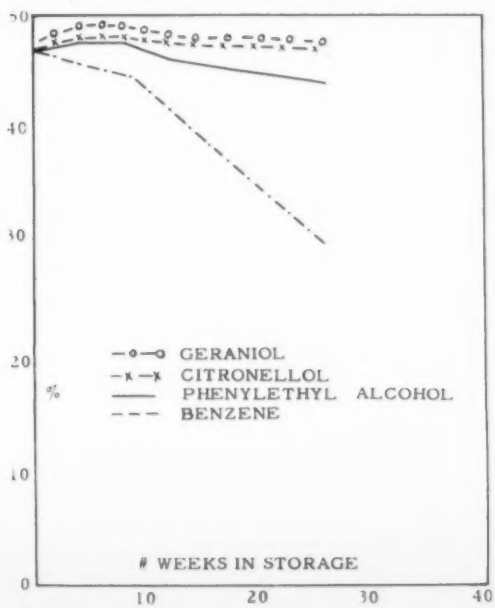
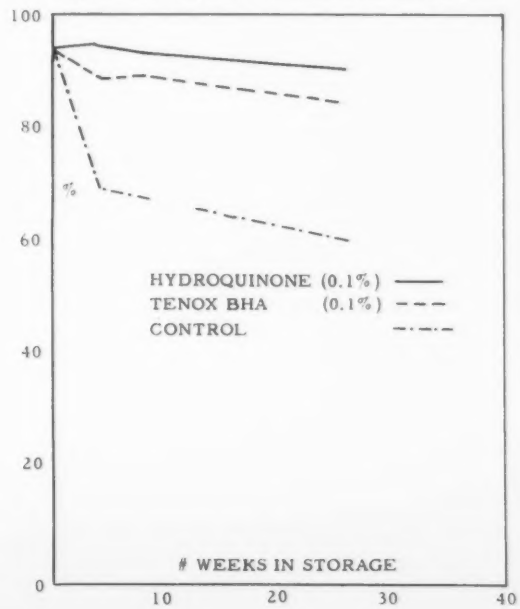


Figure 4—Effect of anti-oxidants on aldehyde C-9.



Sample	Anti-oxidant	% Aldehyde			
		0 weeks	4 weeks	8 weeks	12 weeks
Phenylacetaldehyde	———	90.0	84.0	80.3	80.3
"	0.1% BHT	89.6	84.7	80.8	80.3
α-Phenylpropionaldehyde	———	90.9	87.5	85.2	85.8
"	0.1% BHT	91.0	87.4	84.8	85.7
β-Phenylpropionaldehyde	———	92.8	90.7	89.6	90.0
"	0.1% BHT	93.0	90.5	89.7	90.0
Benzaldehyde	———	96.7	95.6	95.8	95.3
"	0.1% BHT	96.3	95.6	95.6	95.6
Xylylaldehyde	———	86.0	84.7	85.2	85.9
"	0.1% BHT	85.4	85.3	85.4	84.5
Furfural	———	97.7	97.8	97.1	97.2
"	0.1% BHT	98.0	97.8	97.2	96.8
Cinnamylaldehyde	———	98.9	96.5	96.0	96.0
"	0.1% BHT	98.0	96.0	96.4	96.0
α-amylcinnamylaldehyde	———	98.2	95.6	95.9	96.1
"	0.1% BHT	98.3	95.0	95.4	95.8

Table IV—Effect of BHT anti-oxidant on various type aldehydes.*

Tenox BHT to arylalkyl aldehydes such as phenylacetaldehyde, α-phenylpropionaldehyde, and β-phenylpropionaldehyde; aromatic aldehydes such as benzaldehyde, xylylaldehyde and furfural; and arylalkyl unsaturated aldehydes such as cinnamylaldehyde and α-n-amylcinnamylaldehyde stored in amber soft glass bottles with a hand-sealed aluminum screw cap, it was found that the stability of the individual aldehyde was not enhanced by the presence of the anti-oxidant (Table IV).

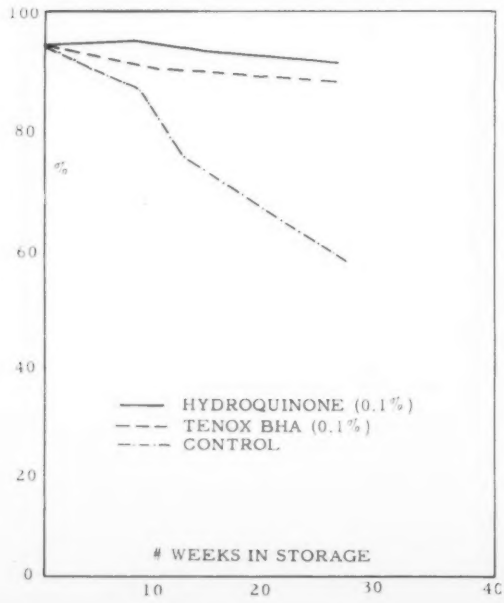
The stability of the aldehyde may also be a function of its molecular structure. For instance, the general increased stability of Aldehyde C-11 over Aldehyde C-9 may be due to hydrogen bonding of its double bond with the aldehyde group of another molecule. Another possibility for this increased stability may be the preferential oxidation of the isolated double bond, such as epoxide formation, without affecting the aldehyde moiety chemically.

It has been shown that compounds containing conjugated systems are more stable. Therefore, it is not unusual that the arylalkyl unsaturated aldehydes and aromatic aldehydes are more stable than the arylalkyl saturated aldehydes. The latter group would behave like a saturated alkyl aldehyde, Aldehyde C-9. This is evident from Table IV.

The general instability of aldehydes stored in amber glassware may be due to the presence of heavy metals. The amber bottles used in our study contained approximately 0.2% Fe_2O_3, 5 p.p.m. Cu, 10 p.p.m. Cr_2O_3 besides small amounts of nickel, cobalt, arsenic, and titanium. The possible destructive effects of these metals may be enhanced in the presence of air. This would explain why amber containers with a double closure are better than amber containers with a paraffin cork closure.

*Storage conditions were amber soft glass bottle with closure C (Table II) at 25°.

Figure 5—Effect of anti-oxidants on aldehyde C-11.



Conclusion

Several variables that may affect the storage stability of aldehydes have been investigated. Of those discussed, the type of bottle and closure had the most pronounced effect. It is recommended that the aldehydes be stored under one of the following conditions: (a) amber soft glass bottles with double closures such as listed in Table II, or (b) clear soft glass bottles with paraffin cork closures; both in dim light at room temperature. Under these conditions, the aldehydes can be effectively stored for a period of three to six months.

It is also suggested that aldehyde stock samples used for odor and analytical comparisons be stored in clear ground glass stoppered bottles.

Citronellol, geraniol and phenylethyl alcohol may be used as diluents for the preparation of dilute solutions with good stability characteristics. Anti-oxidants have been found to be unnecessary even though hydroquinone has stabilizing effects in some instances.

REFERENCES

1. Specifications and Standards of the Essential Oil Association of U.S.A.
2. The Givaudan Index, Givaudan Delawanna, Inc., New York, N.Y., 1949
3. The Essential Oils, Vol. I-VI, E. Guenther, D. Van Nostrand Co., Inc., 1948-52.

Musicochemical Theory of Aromatics

Taste and odor with elegance...

DR. ALEXANDER KATZ
President, F. Ritter & Co.

CONTINUING the article which appeared in the July issue of the AMERICAN PERFUMER AND AROMATICS, "Historical Facts in the Development of Aromatics," reprinted from the Southern California American Chemical Society magazine, I felt that an additional article dealing with the Musicochemical Theory of Aromatics, showing the connection between fine symphony and harmony in perfume compounds and flavorful tasting foods, would be of interest. First, I want to emphasize that before identification of aromatics as chemicals the manufacturers of cosmetic and flavoring products were not in a position to get pure aromatics, even in the middle of the nineteenth century. Nor were essential oils, which were distilled in the sixteenth and seventeenth centuries, accepted by professional users such as pharmacists, as products consisting of many aromatics. They were accepted by the profession as simple bodies. It was impossible to obtain a pure essential oil. Some oils, which were distilled in China for a couple of centuries, such as cassia and anise, were adulterated in a crude way with kerosene or vegetable oils. Such expensive oils as otto rose from Turkey, Persia and other places, were mixed with cheaper oils to lower the quality and cost. This naturally was stopped later on as the identity of the components of the essential oils became known and sought for in the product.

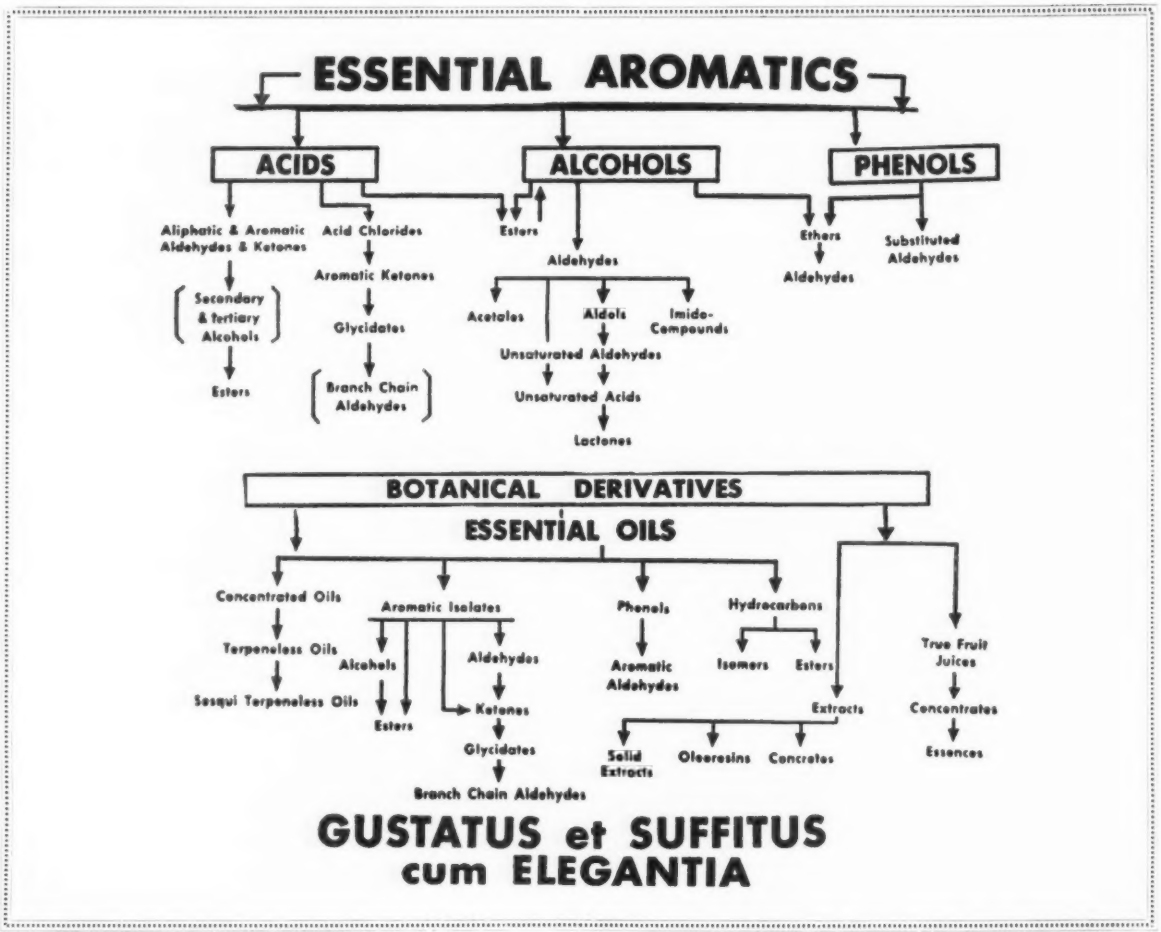
Between the years 1828 and 1846, Jean Baptiste Dumas, well-known French chemist, did remarkable work in identifying essential oils. He was able to divide components of these oils into two groups: those containing oxygen, and oxygen-free components. Further studies on the same components distinguished them as terpenes and camphoracious products. The resultant investigation by Dumas and his students of the Paris Polytechnic School gave Wallach a good start for further research. Wallach, in turn, found various components proving that some of the constituents can be subjected to isomerization, and established that most of the terpenes found in various essential oils are analogous. Wallach determined that hydrocarbons (terpenes) in various essential oils answer the general formula of $C_{10}H_{16}$ and hydrocarbons with the formula of (C_5H_8) X are known as polyterpenes. Out of this group of hydrocarbons, those with the formula $C_{15}H_{24}$ were called sesquiterpenes and their derivatives. All these discoveries play an important part in the preparation of aromatic compounds.

I feel the above additional historical information is necessary to realize the magnitude of consequent developments made by such scientists as Tiemann and others. The last decade of the nineteenth century was actually the "isolation period" of aromatics from essential oils, and practically every scientist doing research in the essential oil line, particularly in Germany, was trying not only to identify the chemical components of essential oils, but also to synthesize the components found in the oils. During this period the study of essential oils was considered a "search for gold." In a short period of time, particularly in the last decade of the nineteenth century, the chemically pure components were developed. Products such as citral, constituent of lemon and lemongrass oils; cinnamic aldehyde, constituent of cassia and cinnamon oils, and a great many others, were not only isolated but synthesized in chemically pure form. The first standards required for these and many other isolated and synthesized products were then determined.

Pursuing the study of components of essential and floral oils gave the researchers an opportunity to determine the chemical nature of isolated components, but the "secrete" of reproduction of the natural products was not accomplished. After many of the components of essential oils were found and identified, it was necessary to locate "olfactory and organoleptic students" who were able to use the identified components.

Eventually, many organic products which had no identity with the natural were found to be useful in preparing flavoring and perfume materials. The industry began to make tremendous strides, attracting the talents of many students and researchers to this field. The great masters of the era in music and art were not only those with the power to create music and pictures; there also developed chemical talents who linked music and painting with aromatics. It was essential for these new artists to attain perfection; therefore the students needed to get special training to identify and classify the aromatics in order to create new odors and flavors as well as to produce natural odors and flavors from synthetics.

One of the many such successful ventures is the compounding of Coca Cola which has been on the American



market for about 70 years. This beverage is just a combination of materials available at that time such as: coca leaf, kola nut, vanilla bean, cassia, lemon, lime and orange oils. Perhaps if such a drink were developed today, there would be a lot of substitutions in the product as, since its creation, cassia, lemon, lime and orange oils, as well as vanilla, have been synthesized.

Parallel with this, in the line of perfumery, floral products containing known constituents as identified in rose, bergamot, orange blossom (neroli), jasmine, etc. were put to work in various compounds, not only reproducing floral products but also making numerous harmonious combinations, thus developing new perfume odors such as Trefle Incarnate, Quelques Fleurs, Jockey Club, Fougere and other oldtime perfumes. Since then, a great many new perfumes, identified only by trade names, have been manufactured. These products are not made exclusively from floral creations; they all contain synthetic products. Without actually taking into consideration the theory of music, the perfumer, in most cases, is applying its theory in his creations. It is more essential in the perfume industry than in the flavoring industry. However it also is important to apply the same theory in the flavoring industry. Both groups of chemists must learn to identify the odor of the constituents or aromatics which are employed in compounds, and also to determine by taste and odor in the case of flavoring compounds.

It also became necessary to acquire knowledge of the harmony of aromatic constituents, their stability and compatibility individually and in a composition in contact with the finished product in which they are to be used, such as beverages, confections, creams, wave lotions, etc. The latter is made with thioglycolate and sulfides which present a great problem to perfume chemists in covering and scenting the product. That is where musical theory functions—such as the string instruments to cover the notes of the heavy instruments without destroying their usefulness.

At present we are a bit retarded in creative perfumery. Still, this period should be known as the "romantic." More fantasies in aromatics are in demand today than during any previous period. The perfumes of the last century were more or less natural Persian lilac, jasmine, rose, tuberose and other floral creations, making it a "dramatic" period. The modern era began when creative perfumers acquired mastery at producing harmonious compositions just as creative composers started to create symphonic music in which an important aspect is harmony. This music is known naturally as classical music the same as present-day perfumes could be considered as classical. Harmony in perfumery could be described as a pleasing arrangement of aromatic compounds. Future creations in aromatics are unlimited; there are many advantages over music since even the "scale" of aromatics is not completely discovered and many more variations are possible. The chart, at a glance, shows the limitless future for development of perfumes and flavors illustrative of its slogan "Taste and Odor with Elegance."

Cosmetics and Toiletries for Men

DR. OLIVER L. MARTON*
Shulton, Inc.

In a market of nearly $1,200,000,000 it is interesting to see what percentage of sales is due to consumption of cosmetics and toiletries by men. No sharp line of demarcation is drawn here between cosmetics and toiletries, although it is generally assumed that cosmetics are mainly bought for some special, yet concrete, effect on and around the skin at the time of application in addition to the subtle but pleasing perfume odor usually associated with this category of products. On the other hand, the predominating value of a toiletries item is its superb fragrance and the abstract effect produced on morale, esthetic mood, nerves, etc. by contact of the fragrance with the odor receptors in our noses. However, as hinted at before, the two effects are often combined in one product.

Before we go into an analysis of the toilet goods market and its breakdown into "male" and "female," let's briefly recall the history and development, as well as the chemical nature, of cosmetics and toiletries for men. As for the history—well, it's as old as that of the toiletries for women.

In fact, much more money has been spent by men than women for these beautifying or spirit lifting luxuries throughout the ages. Just think of the startling discovery of perfume materials, still fragrant after thousands of years, when a Pharaoh's tomb was discovered and opened up in our time, of the highly skilled fragrance specialists employed by extravagant Roman emperors as masters of ceremonies for their fragrant court orgies, of the large consumption of fragrant gums, balsams, resins and spices by the European kings of the Middle Ages or even of more recent centuries.

The turn of the century saw cosmetics and toiletries for men in use to a large extent, yet rather ignored by statisticians and grossly under-rated as profitable business. Sales centered around preparations for the beard, the he-man's advertising sign of masculinity, such as beard setting contraptions and pomades, and for the hair, such as brilliantine, as well as for the mouth, such as tooth pastes and mouth washes. Any preparation of real fragrance value was considered to be below a man's dignity, unmanly. Things changed with the advent of the razor, the appreciation of the clean-shaven face, the consciousness of good grooming. The success of the Gillette Co., running into hundreds of millions of dollars, startled the business world. Shaving brushes were produced by the millions; the use of shaving preparations became a necessity for the daily morning toilette of the master of the family. Soapers were busy pouring freshly made soap melts into shaving mugs, ignoring chemical specifications from batch to batch—rather relying on skilled soap makers whose tongues and taste buds took the place of titrations or modern pH machines. Today, the chemist holds the excess alkali at a few hundredths of a percent after complete neutralization of the fats; and the free fatty acid at a rather low optimum figured to secure for the shaving soap, plasticity, non-irritating properties, maximum formation of moist lather and best stability to rancidity attacks. Then followed with shaving tablet as a refill for the mug, a milled soap cake made by compressing soap chips, just as modern toilet soap cakes are produced, as well as the related shaving soap stick in its cylindrical metal housing. Later shave creams in collapsible metal tubes were considered the last word in shaving preparations although the contents constituted nothing but a wetter soap mix ground to a cream-like consistency with the use of higher percentages of humectants.

The advent of the brushless shaving cream, together with the recent enthusiastic reception that the pressurized aerosol shaving cream has found, should fore-

*Address given as part of the "Symposium on Cosmetics" at the annual meeting of the American Chemical Society, Division of Chemical Marketing and Economics, September 20, 1956.

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cast the beginning of the end for shaving brushes; however, in many parts of the country the male population still sticks to the more old-fashioned types and the manufacturer is thus compelled to manufacture and distribute all the various types of shaving preparations.

Together with the broadening of the market for shaving preparations went the introduction of after shave lotions. These are alcoholic, nicely but not heavily perfumed, clear lotions which rely on their alcohol contents for an astringent, mildly antiseptic effect on the skin just abused by the scraping and cutting action of the razor blade. These lotions thus became the successors to the alum blocks or cakes formerly widely used after shaving to close the pores of the skin by their astringent action. The action of such a concentrated alum application was rather harsh and the burning sensation strong; in fact, the action was comparable to that of tannic acid on hides in the manufacturing of leather. Today all that's left of the alum cake use is a slender styptic pencil to stop bleeding when the skin is cut during shaving.

So the switch to the milder, more pleasant-to-use after shave lotion came as a welcome step forward, inasmuch as by this time the male consumer had learned to lay aside his objections to smelling perfume odors on himself. Perfumers got busy and developed for these lotions what they considered mannish types of perfume odors, such as fougère, tobacco, leather and lilac. Presentation was in rather simple looking glass bottles, devoid of glamor, as fitting for functional cosmetic or toiletries items.

It was left to the firm I have been connected with for many years and which I have the honor to represent today to take a new "three-in-one" step in the production and marketing of men's cosmetics and toiletries less than twenty years ago. "Three-in-one" because three original concepts were combined by the genius of management and scientists to establish the new men's line:

1. Presentation of containers and packages in striking historical, Early American gift fashion;
2. Mass production of gift-package items on the running belt; and,
3. Last but not least, strict chemical and physical control of all ingredients, as well as of the composition of the finished products, by chemists and perfumers.

"John's busy with his summer promotion for his suntan oil."

Report from the

National Bureau of Standards:

A Highly Alkaline pH Standard

To INCREASE the accuracy of pH measurements in the highly alkaline range, the National Bureau of Standards is recommending a sixth pH standard[1] for use along with the five pH standards previously established. Consisting of a saturated solution of calcium hydroxide, the new standard will provide an additional fixed point in the standard pH scale which the Bureau maintains.

This scale was set up[2] in 1948 to meet the need for a single standard pH scale as a basis for accurate measurement of acidity and basicity in aqueous solutions. In the manufacture of many commercial products the rapidity and efficiency of the processes depend upon the accuracy with which pH can be determined.

The NBS standard pH scale is defined in terms of several fixed points in much the same manner as is the International Temperature Scale. The primary standards of the pH scale are solutions whose pH values are only slightly affected by dilution or by accidental contamination with traces of acid or alkali from the walls of the container or from the atmosphere. The substances from which the standard solutions are prepared are, in turn, stable materials which may be obtained as certified standard samples from the Bureau. The five standards thus far established cover the pH range from 1.68 to 9.18 at 25°C. However, the need for a highly alkaline standard has been felt for several years.

The new pH standard is a solution of calcium hydroxide saturated at 25°C. This reference solution is very easily prepared. No weighings are necessary, as a solution of reproducible composition can be made merely by shaking finely granular calcium hydroxide with water. The calcium hydroxide is prepared by igniting calcium carbonate conforming to American Chemical Society specifications for the reagent grade low in alkalies. The solid material must not be contaminated with soluble alkalies, but the presence of carbonate is of no concern, since calcium carbonate will precipitate from the solution at the time of preparation. The filtered solution of calcium hydroxide supersaturates readily and can normally be used over a wide range of temperatures without separation of the solid phase.

The pH of this solution is 12.45 at 25°C and is a rather sensitive function of temperature. Values of pH on the NBS conventional activity pH scale have been assigned at intervals of 5 degrees from 0° to 60°C. Although standard samples of calcium hydroxide are not yet available from the Bureau, highly pure preparations can be readily made from commercially available grades of calcium carbonate.

REFERENCES

1. For further details, see Calcium hydroxide as a highly alkaline pH standard, by R. G. Bates, V. E. Bower, and E. R. Smith, J. Research NBS 56, 305 (1956) RP 2680.
2. Standardization of the pH scale, NBS Technical News Bulletin 31, 138 (1947).

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3rd S.C.C. Seminar

ABSTRACTS of the scientific papers presented at the meeting of the Society of Cosmetic Chemists in December, which were published in part in our last issue, are completed with the following.

Ultrasonic Method of Flow Measurement

THE propagation of transverse elastic waves in liquids and liquid-like substances is dependent upon the viscosity and shear rigidity of the material. For a purely viscous liquid, transverse vibrations are rapidly attenuated since vibrational energy is converted into heat through viscous losses. Wave propagation in the usual sense does not occur. In a liquid in which rigidity is unequal to zero, elastic wave propagation can occur. The wave equation that describes propagation of elastic waves in viscoelastic materials will be discussed and those properties of its solution will be presented that are useful for measuring the viscosity and shear rigidity.

The ratio of stress to particle velocity—the so-called wave impedance—will be shown to be related in a rather simple way to the viscosity and rigidity properties of the material.

Ultrasonic frequencies of vibration have been employed to measure this wave impedance in order to achieve means of viscosity measurement and control. Some of these methods have resulted in instruments suitable only for laboratory use but others have resulted in practical instruments for industrial applications. A general description of some of these approaches will be given and a detailed discussion of an automatic and continuous viscosity measuring device that was developed primarily for industrial use will be presented.

Since the viscous properties of materials are dependent to a considerable extent upon the method by which they are measured, a discussion of the relation between the properties measured by ultrasonic approaches as related to the properties that one normally desires information about will be given. Applications in which ultrasonic instruments do measure properties of interest and those for which ultrasonic methods are not well suited will be discussed.—*Abstract of S.C.C. paper by Wilfred Roth.*

Continuous Processing of Cosmetic Products in Votator Apparatus

THE purpose of this paper is to discuss continuous emulsifications as it is accomplished with a continuous mixing and heat exchange apparatus. Basically it is a discussion of the considerations that must be taken into account when converting a batch operation into a continuous process. The effects of continuous emulsifications as they pertain to premixing or metering techniques, consistency, emulsion stability, are discussed as functions of time, temperature and mechanical work. In addition, uniformity, quality control, economical advantage and automation are taken into account. This is accomplished by covering the subject as follows:

1. A description and operating principles of the apparatus.
2. Comparison of continuous emulsification versus batch operation.
3. Description of commercial processes in which this apparatus is being used successfully.
4. Potentials for continuous emulsification.
5. Advantages of continuous emulsification techniques.

The techniques of determining the process parameters for materials which are semi-plastic or completely nonpourable as a result of emulsification, hold the greatest potential for application studies. Comparison of a continuous operation versus a batch operation reveals the effect and importance of temperature and mechanical work. In short, this is a discourse of studies made on how to produce a better product by making stable emulsions in a matter of seconds as compared to minutes, using precise temperature, time and mechanical work control.—*Abstract of S.C.C. paper by John P. Bolanowski.*

Ultrasonic Emulsification: Theory, Applications and Limitations

FOR the past 30 years much has been reported regarding the use of ultrasonic energy for the preparation of emulsions. In general, where ultrasonics has been successful emulsions have been prepared faster and with more uniform particle size than with other methods. However, there are many instances where ultrasonic irradiation has not been successful. Furthermore, in many cases where ultrasonics has been useful in the preparation of emulsions on a laboratory scale similar methods have not proved to be economic on a production basis.

Although the detailed theory of ultrasonic emulsification is not clearly understood much of the general principles involved are quite clear. A discussion of the present understanding of ultrasonic emulsification will be presented. Much debate concerning necessary energy levels, optimum frequency ranges and types of transducer mechanisms to be employed to achieve practical results has taken place in the past two decades. A summary of some of the major considerations involved in this broad question will be given. Descriptions of commercially available apparatus as well as some interesting new possibilities in this field will be given. Factors affecting the efficiency of equipment for producing large amounts of ultrasonic power as well as the initial and operating cost of such equipment will be discussed. Ways in which available equipment might be installed on a practical basis will also be presented.—*Abstract of S.C.C. paper by Wilfred Roth.*

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MIXER—1

Thorough blending of fluid and semi-fluid substances at rates ten times as fast as those of conventional equipment is claimed by the Gifford-Wood Co. for its Eppenbach Agi-Mixer. The manufacturer says that it consists of a set of double-motion or counter rotating paddles or blades performing in combination with a high-speed homogenizer. The paddles work the material down into the homogenizing zone, where the homogenizer subjects it to a refinement by hydraulic shear. The complete mixing assembly is installed in a kettle which may be of single shell or of jacketed construction and which may be operated atmospherically, under pressure, or under vacuum. Production models are said to homogenize, blend or emulsify up to 1,000 gallons of material in a single operation. Auxiliary equipment is available, and a range of automatic controls can be supplied to fit individual requirements.

POCKET pH METER—2

Beckman Instruments, Inc. claims that its pocket-size pH meter for acidity and alkalinity measurements is accurate, dependable, and easy to operate. Range of the meter is from 2 to 12 pH. The single electrode combines both the reference and glass electrodes. The instrument, which has a "memory" dial for use in standardizing, operates from batteries like those used in flashlights. The manufacturer recommends it for a variety of uses, including spot checking on pH equipment in process plants.

PLASTIC CLOSURE CAPPER—3

The Swan-matic Model 55-CF automatic capper has been developed by the W. H. Swanson & Co. for the application of semi-rigid plastic closures on semi-rigid or rigid containers, requiring gradual roll-on pressure for proper seating. The entire unit is mounted in a closing head, which is adjustable for various height containers having the same cap size. Speed of capping is up to 150 containers per minute. The cabinet, which has a white enamel finish, is 28 inches wide and 20 inches deep. The conveyor height is adjustable from 32 to 36 inches.

FILTER CARTRIDGE

A 5-micron (0.0002 inch) filter cartridge made of white cellulose, bonded with a totally inert resin, is made by the Cuno Engineering Corp. The "White Micro-Klean" cartridge is recommended by Cuno for filtration problems where fluid polishing to extreme clarity is required with no contamination of fluid or impairment of taste. Highly alkaline fluids, in particular, are said to be handled without contamination of the fluid.

LIQUID FILLING MACHINE

A small gravity-type filler from Popper & Sons, Inc., has a width of 8", depth of 11" and height of $14\frac{3}{4}$". The producer says that it fills bottles, jars, vials and cans both large and small, and that aqueous preparations and oils equal to S.A.E. #30 are all handled with equal facility. Quick acting solenoid valves are claimed to give the user a high rate of production.

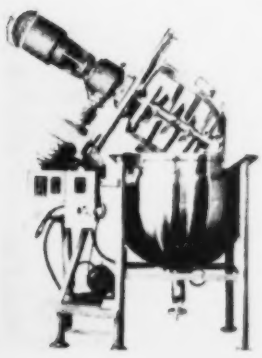
SILICON INTERMEDIATES

New silicon chemical intermediates, known as OrganoFunctional Silanes, are available from Union Carbide and Carbon Corp. The manufacturer says that these new silanes can be reacted with organic chemicals as organic chemicals. *beta*-Carbethoxyethyltrieth-oxysilane is recommended for perfumes and cosmetic creams.

PERFUME SPRAYER

The DeVilbiss Co. offers an automatic perfume dispenser to be used in connection with special promotions. The Sales Stimulizer is said to fill the air with any aroma, and to do so silently and inconspicuously. One filling is claimed to last a day. It is adjustable for compact or open display areas, and can be completely hidden if desired. The power is provided by plugging into a standard electrical outlet.

1.



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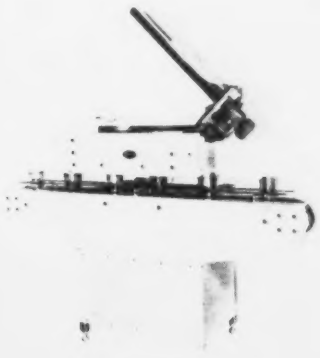
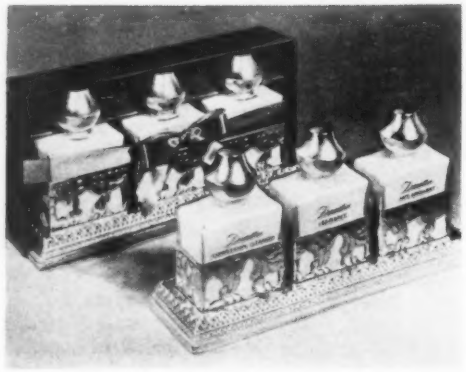


Packaging and Promotion



1.

1. RILLING DERMETICS

Rilling Dermetics Co., to compete with its treatment items in the Christmas market, has packaged its fluid facial set as a dressing table accessory. A gold-like tray and bottles trimmed with a baroque decor is contained in a gift display with bright pink satin ribbon. Coating Products, Inc., supplied the metallized plastic material for the decoration.

2.

2. BOURJOIS

Roman Holiday, a new fragrance series by Bourjois, was introduced last September. It is described as "a subtle blend of florals, spices and sparkling sophistication." Pink is the featured color in the packaging. Column-like bottles are used as the containers for the perfume and cologne. Dusting powder and a perfusion spray mist are also included in the line. The perfume is $15 per ounce.

3. COTY

The new Vitamin Moisture Balancer by Coty is available in two formulas: one for dry and normal skin and one for oily skin. Both come in gold-topped flacons and both are priced at $3.50. The manufacturer says that the cream liquid lubricates and maintains the moisture balance of the skin, while Vitamins A, D and E, and a special lanolin derivative, nourish and promote the growth of new, younger-looking skin.

3.

4. LENTHÉRIC

Lenthéric's purse size Tweed hair spray is available in an individual self-display boot. The bottle sits in the cut-out base of the fuchsia, black and white displayer, and for additional security, a collar fits around the gold cap. The purse-size bottle is a replica of the regular-size one, being covered witn a plastic coating of aquamarine and having lettering in brown. The price is $1 plus tax.

5. NOXZEMA

The Noxzema Chemical Co. says that the Noxzema Girl has increased sales throughout the country. The display features a young lady from the Noxzema organization, who sits on top of a mass display of the company's products, or dangles

4.

5.

6.

her feet from the edge of a counter or shelf. She has to sit, as t e special supporting easel extends only half way down the back of the card.

6. TUSSY

Tussy has provided a hair spray in a mild formula for the young-fry. Budding Beauty Gentle-Set Hair Spray is scented with the Budding Beauty fragrance. The aerosol container is daintily decorated with a pink and gold motif, the Budding Beauty face, and gold-and-black lettering. The non-lacquer formula is said to contain a lanolin-derivative to condition children's hair.

7.

7. JOHN ROBERT POWERS

John Robert Powers puts Turquoise Blue Foam Bath in a huge crystal clear apothecary jar which is tied with a matching satin ribbon that holds a bouquet of flowers. The package is $12.50 for 16 ounces. The dusting powder in the Susceptible fragrance comes in a turquoise satin box lined with gold foil. On the cover is the Powers monogram heavily embossed in gold. The six-inch pale pink French velour puff is banded in turquoise satin. An eight-ounce package sells for $5.

8.

8. HELENA RUBINSTEIN

Helena Rubinstein has introduced a simplified two-speed permanent wave. In the flat unit package there are two types of wave: the salon-type, for the curler method using instant neutralizer and containing Nutrinair conditioner for a high-style lasting coiffure; and the pinwave permanent, for a pincurl method requiring no neutralizer. Except for bleached, dyed or problem hair, no test curls are necessary, it is claimed. The price is $1.50.

9.

9. FABERGÉ

The first new Fabergé fragrance in six years is Flambeau. Made in France, the new line is gift boxed in reds flashed with black and sparked with gold. The perfume ranges from $10.50 to $110. The purse container comes in a red velvet presentation case for $5.50. Cologne and bath powder are also available .

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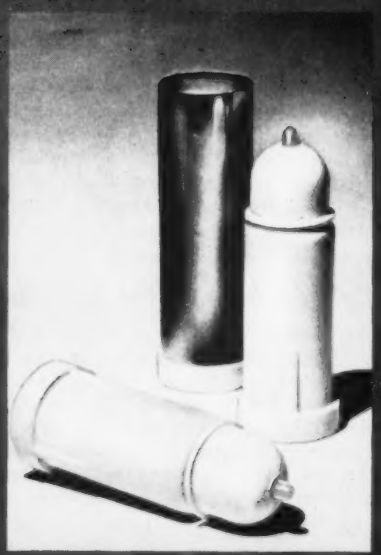

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AEROSCRIPTS

Jack Pickthall

This is my first effort as a "column" writer and I must admit that I commence with some trepidation. I say this chiefly because I write from the other side of the water and I realize only too well that America has developed this industry right from the word go—propellants, containers, valves and contents-formulation. It is doubtful whether Europe will ever catch up with America and just as doubtful whether all the U.S. products will find a market in Europe.

When I received the approach from the AMERICAN PERFUMER my second reaction (the first was to frame the letter) was to wonder whether American readers would take kindly to advice from someone outside their own country. At any rate, it was obvious that no single person could handle such an assignment without considerable external help. An admirer of Ed de Navarre's free and easy, but extremely efficient and well informed "Desiderata," I have always wondered how he manages to collect his information. Despite four very enjoyable recent meetings with Ed, I never got round to asking his secret.

My own approach was to obtain a comprehensive list of each and every company with any connection with the aerosol industry in as many countries as possible. At least, that was the intention but it will be nothing short of a miracle if I have not missed several important people. To all the people located, I sent letters asking for as many details as possible concerning the products they supply or services they offer. To this I added the plea for future information on new developments. In all, I sent out about two hundred and fifty letters, one hundred and sixty of them to America, covering sixteen separate countries. As I say, I will have undoubtedly missed important people and if so, this serves as an invitation to write to me.

Although relatively little time has elapsed since sending out my request, fifty answers have been received and the tone of the answers and the help given or offered is extremely gratifying. What has particularly pleased me is the friendly answers from America where practically every letter commences "Dear Mr. Pickthall." The odd firm (not from America) expects a "plug" but such suggestions are rare. Some of the books, pamphlets and general literature sent me are really magnificent.

For my sins, I have agreed to a "question and answer" section.

Progress in Europe is gaining in momentum and I hope to talk of production figures in the near future. In the meantime and by way of an introduction to the subject, I must say a word on the problem of the naming of propelling materials. "Propellants" or "Propellents"? When I first had cause to delve into this question I was strongly for "propellant" and after recent investigations, retain this opinion. In the majority of dictionaries, "propellent" is shown as the adjective and meaning propelling, whilst "propellant" is the noun and refers to that which propels. It is as a noun that we speak of these chemicals in nearly all cases. This decision is backed up by the fact that the British Government in their literature, speak of explosives etc., as "propellants." The fly in the ointment is that the Concise Oxford dic-

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tionary does not mention "propellant" and uses "propellent" as both noun and adjective. For me it is still "propellant."

Another difficulty which besets writers in this field is the naming of the various halogen type propellants. To give each its proprietary name and number is simple, but obviously not to the liking of other suppliers. I know this subject has been tackled only recently by one journal but it is worth pursuing. If we could have a simple descriptive name for tetrafluorodichloroethane, it would bring joy to typists even if it cut down material for writers. One particular firm has done so much pioneering work and has issued such superb technical booklets, that they almost deserve to have their own proprietary name used as a general description for each halogenated propellant. There will, of course, be obvious objections to such a suggestion.

It seems a sound idea to use the word "Aerosol" to describe the product or final presentation and use the small capital (aerosol) when speaking of the actual spray.

Intriguing indeed is the introduction or perhaps extension of the "inert" gases as propellants, and I am anxiously awaiting some details. One's first impression is to wonder about the prices of helium, argon and krypton and to think of the high pressures involved.

The fire risks of butane and propane remain with us, and the fact that carbon dioxide and nitrous oxide function as dissolved gases will mean a falling off in pressure as the contents are used. To use inert gases together with the less stable halogenated hydrocarbons, as has been suggested, may well defeat the whole object of introducing these products. The general idea appeals, if only because it offers a further link between the cosmetic and pharmacuetical industries. However, further information on the polysol concept is, I hope, on its way.

One of the urgent talking points in the aerosol industry, at any rate in the U.K., remains the dangers of uncoated glass containers. People from all sections of the industry are staggered when they first hear a low-pressure uncoated glass Aerosol dropped. When they see the results of that dropping test, they are even more staggered. It seems to me that no service to the industry has been rendered by certain writers of articles on the safety of uncoated glass Aerosols. I would like to give some facts and figures in a future column. It is not good enough to regard ease of breakage as the sole criterion of safety and the comparisons made to beverage bottles are mainly inaccurate and considerably misleading.

Statements which have been made are still being re-quoted by many firms and many writers of articles and it is time that someone clearly revealed the relative danger of uncoated glass Aerosols when compared with carbonated beverage bottles. The development of a technique which makes it possible to photograph bottles in the act of breaking has been pretty difficult but these difficulties have now been overcome. The photographs taken show quite clearly the dangers of low-pressure glass aerosol bottles (uncoated) and the safety of the adequately coated bottles. They show just as clearly that even high-pressure carbonated bottles break in a way which offers small hazard to anyone in the vicinity. I very much hope to find an opportunity to write this story in some detail.

As most people will remember, it has been written that the difference in cost between uncoated and coated bottles buys a lot of insurance. This is such a wrong approach to the question that it can do no good to anyone, including the writer of that particular text.

JANUARY AEROSOL ISSUE

A reminder! THE AMERICAN PERFUMER salutes the new year of 1957 with a special aerosol emphasis issue. A body of experts will present their views on a vital new element in the cosmetic picture—one which has affected you, and will continue to influence your thinking if you are a supplier, manufacturer, packager or merchandiser in the toiletries field. You'll find th facts and figures you need in the Special Aerosol Section of our January issue.

TRADE LITERATURE

Gas chromatography is the subject of a recent issue of "Research Comments," from the Evans Research and Development Corp. The article traces the historical background, the theory, the practice, and the potentialities of this new addition to the field of chemical research.

SeaKem Technical Bulletin 42 by the Seaplant Chemical Corp. is entitled "SeaKem Colloids—How to Handle and Use Them." It gives data on how to store, amount to use, how to put into solution, and formulation of end products. Detailed information on individual applications is available on request.

Aromatic Chemicals for October-December 1956 has been released by Polak & Schwarz. It contains a price list of many of the chemical products produced by the company.

Direct mail advertisers can obtain a booklet from Berliner Mailing Lists, Inc., which lists mailing pointers. Included is a Check List for Mail Advertisers which enables evaluation of mailing programs by pointing out serious defects and omissions.

Tube Talk, a booklet from the National Collapsible Tube Co., is sub-titled, "How to package for Profit." Among the topics discussed are: What are collapsible tubes; Tube terms; Choosing the right tube; Selecting the metal; Standard tube sizes and necks; How to select the tube. Graphs, charts and illustrations are used to amplify the material. Two pages are devoted to capacity and conversion data.

The role of radiochemicals in research is described in the pamphlet "Baker & Adamson Radiochemicals" by Allied Chemical & Dye Corp. In addition to the text there are eight pages of tables listing available radiochemicals and other information.

1957 Guide to Dow Corning Silicone Products is a new brochure from the Dow Corning Corp. It describes various silicones with their characteristics. One section is devoted to cosmetic ingredients.

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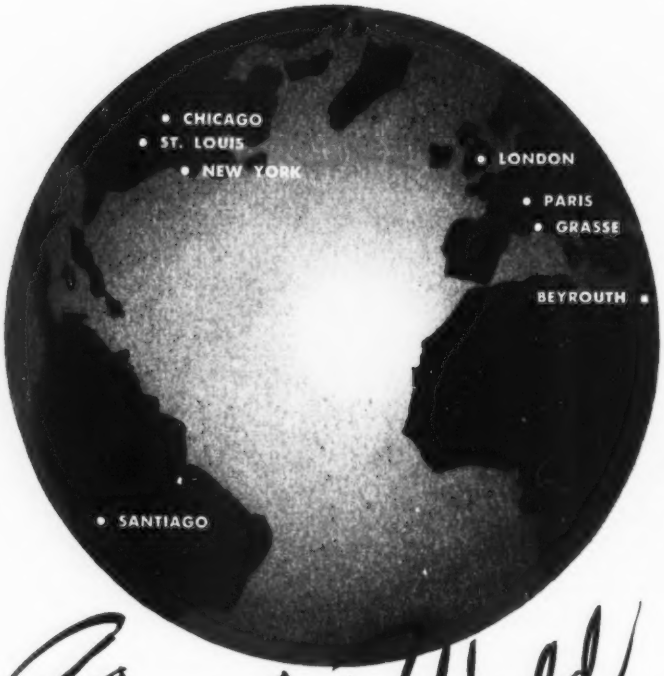

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FOOD Additives in FOOD Processing

Review of the report of the Food Technology Subcommittee of the Food Protection Committee of the Food and Nutrition Board

MORRIS B. JACOBS, Ph. D.

THE Food Technology Subcommittee of the Food Protection Committee of the Food and Nutrition Board of the National Academy of Sciences—National Research Council has recently issued its publication No. 398 on "The Use of Chemical Additives in Food Processing." Since the control of additives in foods is likely to be considered again by the next Congress, it may very well be that this publication will play some role in its deliberations. For this reason a review of the contents of this publication is in order.

Food and Nutrition Board

The Food and Nutrition Board, as noted in this publication, is an activity of the National Research Council, established under the Council's Division of Biology and Agriculture. It obtains its funds from private sources such as the Milbank Memorial Fund, the Nutrition Foundation, and the Williams-Waterman Fund of the Research Corporation. The members of the Food and Nutrition Board, like the members of committees of many scientific organizations, serve without compensation.

The National Research Council is a part of the organization of the National Academy of Sciences. Money donated to the Food and Nutrition Board is received and administered by the Academy which is a private nonprofit corporation chartered by Act of Congress in 1863 for the furtherance of science and to provide a source of scientific advice to the Federal Government.

Contents of Report No. 398

In its introduction to this report, the Food Protection Committee points out that in 1950, the Delaney Committee (officially the House Select Committee to Investigate the Use of Chemicals in Food Products) had stated that according to reports of the U. S. Food and Drug Administration some 704 chemicals were used in foods of which only 428 were known to be safe. Because of statements of this nature which might possibly be misleading, the Food Protection Committee undertook "a study of the use of chemicals in foods for the purpose of evaluating the technological benefits arising from such use and of appraising the significance of associated public health problems."

It is most interesting to me to note certain similarities in the classification and grouping of the chemicals mentioned in the Food Protection Committee report and my book on *Synthetic Food Adjuncts*, Van Nostrand, 1947. For example, my book contains a note on page vi in which the following statement appears: "The author wishes to state clearly that the mention of a particular substance in this book does not in any manner imply that he approves of the use of that substance in foods." The Food Protection Committee Report states on page v, and again on page 29 in italics, "The inclusion of chemicals in the list of food additives in this publication does not imply the approval or disapproval of the National Academy of Sciences—National Research Council."

In the writing and organization of *Synthetic Food Adjuncts*, a functional or use classification was employed; thus the major topics were coloring matters, flavoring materials, a section on synthetic and other sweetening agents, chemical preservatives and stabilizers, and vitamins. The section on chemical preservatives and stabilizers was further subdivided into bacteriostatic, fungistatic, or germicidal agents, antioxidants, neutralizers,

stabilizers and emulsifiers, coating and wrappings, maturation agents. In my chapter on "Chemical Preservatives" in the first edition of my treatise, *Chemistry and Technology of Food and Food Products*, Interscience Publishers, 1944, the subsections were: bacteriostatic, fungistatic, or germicidal agents, antioxidants, neutralizers, stabilizers, firming agents, coatings and wrappings, expanded use of chemicals, gas storage, and gas maturation.

It is interesting in the Report of the Food Protection Committee issued in 1956 to find the following statement, "Intentional chemical additives have been defined by the Food Protection Committee as those chemicals introduced for the purpose of imparting some desired quality to, or of serving a functional purpose in, a food product. Such materials as coloring agents, flavors, nonnutritive sweeteners, nutrients for food fortification, preservatives, antioxidants, emulsifiers, and bleaches are all intentional additives." The intentional additives used in processed foods are put into 12 groups, namely, preservatives, antioxidants, sequestrants, surfactants, stabalizers and thickeners, bleaching and maturing agents, buffers, acids, and alkalies, food colors, nonnutritive sweeteners, nutrient supplements, flavoring agents, miscellaneous.

A well-known phrase is "imitation is the sincerest form of flattery" and I suppose I should have been flattered since the similarities in treatment appear to be more than coincidental but it would have been nice to have received some mention.

Flavor Sections

Of course what interests us here is not the similarities between the treatment accorded food adjuncts in general with my books but the consideration of flavoring matters in the Food Protection Committee Report. The report itself is divided into two main sections, part I being concerned with the technological benefits of intentional additives and part II being concerned with intentional additives used in processed foods as already noted. Part I is subdivided to treat cereal products; processed fruits and vegetables; beverages; dairy products; confections, sweeteners, and sugars; and meat products and fats. There is brief mention of the use of flavoring matters in each subdivision except that of dairy products.

The section on flavoring agents including aromatic chemicals, essential oils and other materials such as spices is by far the largest section of the report, comprizing some 18 pages. Some 285 chemicals or materials are included in its tabulation of which 205 are synthetic chemicals or isolates, 77 may be grouped with essential oils, spices or other natural flavoring materials, and three others.

It is true that the members of this Committee serve without compensation, as mentioned in the second paragraph above, nevertheless one must take note of the fact that the flavor section could have been reviewed by someone who knows something about flavoring matters with benefit. While both the Food Protection Committee and the Food Technology Subcommittee have well-known food technologists as members, indeed some of them have been my collaborators in the past, I regret that I must conclude that their knowledge of flavoring matters is not very great.

Suggestions

This Committee states both on page v and on page 29 of their report, in the latter case in italics, "The purpose of the Food Protection Committee is to list all chemicals about which the committee has found authentic evidence of use. The committee will appreciate receiving suggestions for additions, corrections, and other improvements of the list."

Well, my first suggestion is that they get someone who knows something about flavoring matters to be a member of their committee. My second suggestion is that they ought to get someone who knows something about organic chemistry to be a member of their committee, and my third suggestion is that they get a member who knows something about chemical nomenclature. If these things are done, maybe the next issue or edition of their listing will be a better job.

My reasons for the above suggestions will be clear from a consideration of some of the following items. In their listing there are three columns; in the first the additive is listed; in the second the standards, regulations, usage are detailed; and in the third the levels of use are given.

Criticism

On page 63, "allyl heptoate" is listed as a component, I presume, of pineapple flavor in soft drinks with the level of use as less than 1 part per million. Immediately following this entry is one for "allyl heptylate" as a component of pineapple flavor used for ice cream with a level of use less than 25 parts per million. Now it happens that allyl heptoate and allyl heptylate and, I might add allyl oenanthylate, allyl enanthylate, allyl heptanoate, and allyl enanthate are all synonyms for the same substance with the latter name, allyl enanthate being the one accepted by *Chemical Abstracts* and thus preferred. Since most of the other entries having synonyms have the synonyms listed in apposition in parentheses, one might conclude that allyl heptoate and allyl heptylated were considered separate compounds.

Consistency was not considered a virtue in the listing of these flavoring compounds. For instance amyl enanthate is listed as "amyl oenanthate" and not as amyl heptoate or amyl heptylate.

Cinnamaldehyde is listed as such with the synonyms cinnamic aldehyde, 3-phenylpropenal, beta-phenylacrolein but capraldehyde is only listed as a synonym along with Aldehyde C-10, decanal, and decyl aldehyde to capric aldehyde.

Gamma octalactone, dodecalactone, 1, 4-nonyl lactone are listed but gamma-undecalactone is not listed even as a synonym. The compound itself is not ignored since it does appear as "undecyl-lactone" with the synonyms aldehyde C-14, 1,4-hendecanolide, peach aldehyde, gamma-n-heptylbutyro-lactone. Since, however, none of the synonyms are actually listed, as cross references, nor indexed, one would have to go through the entire listing in order to find it.

Of course, I could not miss my favorites, namely, bourbonal which is listed as a synonym along with 3-ethoxy-

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4-hydroxy-benzaldehyde and protocatechualdehyde-3-ethyl ether as "ethyl vanillin" and biacetyl which is listed as a synonym along with 2,3-butanedione and dimethylglyoxal as "diacetyl." The Food Protection Committee cannot be criticized for these two listings since most flavor chemists use these incorrect terms. Indeed some flavor chemists seem to be unaware of the fact that so-called "ethyl vanillin" is actually a methyl derivative of vanillin.

I could cite many more instances of such inconsistencies in nomenclature and errors like terming acetyl propionyl as acetyl propionate and listing propenyl ($CH_3CH{:}CH$-) hexanoate as a synonym for allyl ($CH_2{:}CHCH_2$) caproate but those I have mentioned will serve to make my point.

I mentioned that the second column of the listing was concerned with usage. Here very limited information is given, thus for any one substance, generally, its use in only one flavor is given. For instance the only flavor listed in which ethyl acetate is used is pineapple flavor!

The listing has some value in that it may actually represent chemicals and other flavoring materials that are presently in use. The quoting of levels of use is probably of greater importance but since the range quoted is often large, it is difficult to interpret such data. For example, the ranges of ethyl acetate used as a component of a pineapple flavor are given as:

Beverages	0.13 to 132.0 ppm
Candy	18.0 to 73.5 ppm
Ice Cream	0.143 to 101.6 ppm
Gelatin	313.3 ppm
Baked goods	26.4 ppm

In the case of the flavored gelatin, the 313.3 ppm probably refers to the concentration of the ethyl acetate in the packaged material (though this is not stated nor implied). In the actual gelatin dessert the concentration would, of course, be less since it is diluted with about three parts of water.

I do not wish to appear hypercritical nor do I subscribe to the theory that only a particular craft is entitled to run everything about that craft from the administrative to the service function. Nevertheless, this particular report may be used for consideration by the Congress of the United States in enacting legislation which will affect all of the people of our country. In this light it surely would not have detracted from the report if someone who knew something about flavors had been consulted in its preparation and before it was rushed into print.

Dr. Victor G. Fourman Addresses Flavor Seminar

Dr. Victor G. Fourman, president, Syntomatic Corp., was guest speaker at two recent meetings of a Food Technology Seminar currently being conducted by the Department of Chemical Engineering, The City College of New York. Dr. Fourman's subject was "Flavors in Relation to Food Technology."

Dr. Victor Fourman

Dr. Fourman is an alumnus of the City College of New York and he received his Ph.D. in organic chemistry at Columbia University. He held a research fellowship at Columbia, where he did extensive work on catalytic dehydration.

Quintessence Laboratories Offers Flavor Materials

Quintessence Laboratories has announced its establishment in New York City with an installation including plant, offices and research facilities, to offer flavoring extracts, essential oils, true fruit and artificial flavors, aromatic chemicals and certified colors to confectionary and bottling trade, as well as to the food and beverage industry in general. Dr. Norman C. Larson heads the organization.

Dr. Bernard Oser Addresses Society of Flavor Chemists

Dr. Bernard Oser of Food Research Laboratories addressed the Society of Flavor Chemists on the subject of "Toxicological Tests on Food Additives." The talk was delivered at the December 6 meeting in New York City.

Paul Armstrong Retires as Sunkist General Manager

Paul S. Armstrong, general manager of Sunkist Growers, has retired after 25 years in that position. When Mr. Armstrong joined Sunkist in 1916 the company originated a sales promotion idea which had a profound influence on the citrus industry. It was in that year that the slogan "Drink an Orange" was introduced, with the idea that when people drink orange juice they consume more oranges than they would if eating fresh fruit. Sunkist credits the repsonse to this promotion for the existence of many orange groves now in Florida and California. Today Sunkist is emphasizing the consumption of the fresh orange again, as it brings a better return to the grower.

Flavor Literature

Polak's Frutal Works, Inc. recently published a new 14-page flavor catalogue listing essential oils, terpeneless oils, synthetic aromatics, natural and imitation flavors, specialties, etc. Copies have been distributed to the trade. Additional copies are available upon request.

Grape is a booklet devoted entirely to grape and grape flavors. Information includes cultural history, popular varieties and primary growing areas. It is published by Hurty-Peck & Co.

A new coconut essence is described by Fritzsche Brothers, Inc. in a recent news release. Essence Coconut Imitation No. 25588 was developed for use either as a fortifier or a complete relacement for natural coconut. Extremely close simulation of natural flavor is said to be possible by the use of certain flavoring fractions heretofore unavailable.

Sunkist Growers has issued two bulletins on how lemon and orange juice contribute to better food and beverage products. Applications are listed.

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TECHNICAL abstracts...

Progesterone and Estrogen Requirements to Induce and Maintain Decidua. James T. Bradbury, Robert C. Long, and W. C. Durham (Univ. of Louisville, Louisville, Ky.). Fertility & Sterility *4*, 63-71, discussion 72-5(1953); cf. C.A. *47*, 2860b.—Women given daily intramuscular injections of 1 cc. oil contg. 25 mg. progesterone (I) plus 2.5 mg. mixed estrogens showed no significant alteration in their menstrual rhythm or endometrial histology. Four different oral estrogens were given daily in varying doses together with 25 mg. I in H_2O given intramuscularly; the min. effective dose which induced decidual endometrium was: stilbestrol 0.5-1.0, equilin 0.5-1.0, conjugated estrogens 2.5-5.0 mg. Na estrone sulfate was ineffective in doses of 5 mg. daily. *Thru C. A. 49, 1175b*

New Gums For Pharmaceutical Jellies. Hastings H. Hutchins and Robert E. Singiser (Merck & Co., Rahway, N. J.). J. Am. Pharm. Assoc., Pract. Pharm. Ed. *16*, 226-30 (1955).—The following are described and studied as to their value in prepg. jellies: tragacanth, karaya, locust bean, and Jaguar gums, kelgin, Kraystay, methylcellulose, Na (carboxymethyl) cellulose, Veegum, and Thix. Glycerol and propylene glycol show no distinct advantage of one over the other in regard to wetting properties, thickening, degree of gelation, or as humectants. Prepns. contg. surfactants possessed superior wetting properties and better spreadability than jellies contg. no such agents. Na dodecyl sulfate appears to be the least desirable agent because of bubble formation during the prepn. of the jelly. All of the jelly bases are subject to microbial action; this condition can be effectively remedied by the use of alkyl p-hydroxybenzoates, which also appear to produce more viscous jellies with an increased rate of gelation. Thru C.A. *49*, 10582f.

Scalp and Hair Preparations. III. Permanent-Wave Preparations, With Special Reference to Thioglycolic Acid, Thioglycerol, and Thiolactic Acid. Julius Böss. Seifen-Öle-Fette-Wachse *80*, 205-6, et seq. (1954); *81*, 11, et seq. (1955); cf. C.A. *47*, 10178i—A chronological review dealing particularly with the patent literature. Numerous references. Thru C.A. *49*, 10588a.

Ointment Bases From Polyglycerol Esters. I. Polyglycerol and its Esters. S. D. Bhirud, N. R. Kamath, and M. L. Khorana (Univ. Bombay). Indian J. Pharm. *16*, 189-96(1954).—Polyglycerols (I) are formed on heating glycerol at temps. >250° in the presence of an alk. catalyst, such as NaOH. The reaction rate can be followed by n_D measurements. I appear to be mixts. of linear and cyclic dimers contg. a small amt. of free glycerol. Typically, 2000g. of glycerol is heated under CO_2 in the presence of 0.1% NaOH at 250° to const. n_D; the product 1500g.) has a d^{29} 1.2130, $n^{29}D$ 1.4950, HO value 934, free glycerol 1.67%. I stearates are readily formed at 250° under inert gas. Depending on the amt. of stearic acid used, products which show promise as w./o or o./w, emulsifiers are obtained. Thru C. A. *49*, 7812c.

Antiburn Ointment. Josef Bild. *Austrian 181,690*, Apr. 12, 1955. Flowers of *Calendula* officinalis (I) are extd. with org. solvents, preferably EtOH. The ext. is evapd. to dryness and the resinous dry residue is intimately and homogeneously mixed with a molten nonaq. ointment base, e.g. vaseline (II). Powd. or colloidal S and plasticizers are added optionally. A preferred compn. is fresh I 60, II 1000, Peruvian balsam 8, powd. S 6, and menthol 4g. Thru C.A. *49*, 7816e

Depilation Cream. Gino Matuskura, *et. al.* (to Tanabe Drug Manufg. Co.). Japan. 2999(53), June 26. A soln. of 75 parts of 85% SrS in 500 parts water is heated for 1 hr. on a steam bath, cooled <5°, and filtered to obtain 450 parts filtrate. The filtrate is heated with 40 parts starch to obtain 400 parts paste, and this is mixed into 20 parts 50% NaOH and hydrophilic ointment to make 1000 parts product. C.A. Vol. 48, No. 13, 7855.

The Boric Acid Problem. C. E. Brooke. GP (Kansas) *7*, 43-5(1953); Excerpta Med., Sect XIII *8*, 238 (1954).—H_3BO_3 powder applied to the macerated skin of the perianal region in infants with ammonical dermatitis or acute diarrhea can be absorbed through the skin in sufficient quantity to cause severe poisoning and death. Chem. analysis of tissues removed at autopsy revealed large amts. of B in most tissues. Poisoning results in diarrhea and vomiting, which may be accompanied by gastrointestinal hemorrhage, shock, stupor, and death within a few days. Treatment is supportive, no specific antidote being known. It is recommended that the indiscriminate use of H_3BO_3 for treatment of diaper rashes be discouraged. *Thru C.A. 49, 14166c*

Thymol Blue as a Reagent for Anionic Surfactants. K. Peter (Fabwerke Hochst, Frankfurt/Main, Ger.). Fette u. Seifen Anstrichmittel *56*, 997-1001 (1954).—Anionic surfactants give a definite red-violet color with Thymol Blue; 5 ml. neutral surfactant soln. is added to 5 ml. 0.005N HCl contg. 3 drops 0.1% Thymol Blue. *Thru C.A. 49, 13819e*

Separation of Mineral Oil-Vegetable Oil Mixtures Using Adsorption Columns. R. P. Harker (Chem. & Ind., 1955, 21, 592).—Two methods were found to be successful in separating the constituents of mixtures and emulsions of paraffin and olive oils. (i) Emulsions of the two oils, stabilised with nonionic "Lissapol N," were passed through ion-exchange resin columns (in some cases, with powdered activated charcoal added) and then eluted with acetone-chloroform mixtures. Almost complete separation was achieved, the detergent remaining in the column. (ii) A solution of the mixed oils in light petroleum (boiling range 40° to 60°C) was applied to a column of chromatographic-grade alumina and eluted with solvent. Rapid and complete separation, with recovery > 97 per cent was obtained. Assessment of the degree of separation was made by measurement of refractive index and i.r. absorption spectra. The techniques used were those described by Harker et. al. (Anal. Abstr., 1954, 1, 1575)and Green et al. (Anal. Abstr., 1955, 2, 120). *Thru Analytical Abstracts, 2, No. 10, 2857 (1955)*

Percutaneous Absorption of $Hg^{203}Cl_2$. R. Wernsdorfer (Univ. Erlangen, Ger.). Klin. Wochschr. *33*, 626(1955).—The skin of guinea pigs was treated with labeled $HgCl_2$, and the amt. of absorption was detd. after 6-16 hrs. by measuring the radioactivity of the heart, lungs, liver, kidneys, and blood. No absorption was detected irrespective of whether the $HgCl_2$ was applied as an aq. soln. or incorporated into various salves or powders. *Thru C.A. 49, 14181b*

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Formation of Free Radicals in Phenolic Antioxidants. J. Baltes (Deut. Inst. Fettforsch., Munster/Westf., Ger.). Fette u. Seifen Anstrichmittel *56*, 984-6(1954).— Dehydrogenation of 2-tert-butyl-4-methoxyphenol with $K_3Fe(CN)_6$ gives a deep blue free radical (I) which reacts further to form 2,2',6,6'-tetra-tert-butylstilbenequinone; under the same conditions, 2,6-di-tert-butyl-p-cresol gives a similar I which yields a-tocopherylquinone. The bluish tint often observed in fats stabilized with antioxidants is probably due to such I. Butylhydroxyanisole gives a comparatively stable I which has strong antioxidant properties. *Thru C.A. 49, 13930h*

Essential Fatty Acids. H. J. Thomasson and H. deIongh (Unilever Research Lab., Zwijndrecht. Neth.). Fette u. Seifen, *57*, 390-3(1955).—If the position of the double bonds in linoleic, linolenic, and arachidonic acids is numbered from the carbonyl group different nos. are obtained for each acid because of the difference in chain length; if the numbering is begun from the terminal methyl group, the same nos. are obtained for the first two double bonds. With the latter numbering system it is shown that olefinic bonds at the 6,7 and 9.10 positions are necessary for biol. activity. The time required for the test for vitamin activity was reduced to 9 weeks by limiting the water intake of the exptl. animals. The activity of brain tissue fatty acids was shown to be in the C_{20} and C_{22} fractions. *Thru C.A. 49, 14071h*

Melanin, the Black Pigment of Skin and Hair. B. Schmidli (Univ. Clinic, Bern, Switz.). Helv. Chim. Acta *38*, 1078-84(1955) (in German).—Natural melanin from human hair and various synthetically produced melanins were examd. chromatographically, spectrophotometrically, and with the electron microscope. Natural melanin obtained by present methods was shown to be by chromatography a mixt. of pigments with a melano-protein. A protein-free melanin of greater soly. and more color intensity was obtained by treating hair with a satd. soln. of Na_2S at 50°. This dissolved the decompn. products of keratin, leaving the bulk of the melanin as a black, oily residue. Extn. of the residue with N NaOH, or heating with dil. HCl, gave chromatographically homogeneous melanin. Diffusion measurements show it to have a mol. wt. of about 70,000. *Thru C.A. 49, 14134i*

Analysis of Buffer Systems in Saliva. B. Lilienthal (United Dental Hosp., Sydney, Australia). J. Dental Research *34*, 516-30(1955); cf. C.A. *49*, 9781i.—The buffer capacity of activated saliva is due largely to bicarbonate; phosphate probably is the only other buffer of significance; mucoid plays no detectable role as a buffer; any buffering by microorganisms is insignificant. In resting saliva the buffers are bicarbonate and phosphate; mucoid has no influence. Salivary sediment has adsorbed a variable amt. of bicarbonate; buffering action of the plaque depends only on the microorganisms. *Thru C.A. 49, 14135b*

The Problem of Deodorization. H. P. Fiedler (Vasenol-Werke Dr. Arthur Kopp KG., Oberndorf a. Neckar, Ger.). Fette u. Seifen Anstrichmittel *56*, 37-40(1955).—Methods of prevention of body odor are reviewed and discussed. F. believes the mechanism of deodorization to be dependent on the adsorption of the odoriferous compds. and ascribes particular importance to the presence of N in many deodorant mols. *Thru C.A. 49, 14276h*

Vanilla and Its Extracts. A. Maurel. Inds. parfum *9*, 430-3(1954); *10*, 14-19(1955).—With a summary of various methods for the com. prepn. of vanilla exts. are included the consideration of relatively new methods for the detn. of vanillin (cf. C.A. *48*, 8490i) and the results of vanilla extns. performed with different concns. of alc. (cf. C.A. *49*, 1988a). Exam. of paper chromatograms disclosed the presence of 4-hydroxybenzaldehyde in the exts. *Thru C.A. 49, 12748c*

Black Pepper from Nigeria. E. Brown, T. J. Coomes and G. B. Pickering. Colonial Plant and Animal products (London) *4*, 320-7(1954).—A sample of pepper from Meanja was found to have the same market value as Malabar pepper. Three Indian varieties of pepper grown in Nigeria resemble Indian black pepper but possess a high starch and low 'piperine' content. The Kallivali variety seemed to possess the best com. valuation. *Thru C.A. 49, 12748d*

Emulsifying, Gelling and Dispersing Agents and Their Use. K. Kappeller. Deut. Drogisten-Ztg. *5*, 10-11(1950); Chem. Zentr. *1952*, 1711.—The most important natural and some synthetic emulsifying, gelling and dispersing agents for chem.-tech. and cosmetic products are reviewed. The following are treated individually as to methods of production, phys. properties, soly., and special uses: agar agar, carrageen, gelatin, gum arabic, carob-bean flour, colloidal silicic acid, pectin, tragacanth, and tylose. *Thru C.A. 49, 12781e*

Oil in Water Emulsions, Analysis of. T. Freen, R. P. Harker and F. O. Howitt. (Analyst 1955, *80*, 470). A general method is given for the analysis, using ion exchange resins, of the constituents of emulsions stabilised by different types of detergents. Using columns of Zeo-Karb 225 in bead form mixed with powdered animal charcoal, percolation of soap solutions and soap stabilised emulsions gave clear liquors from which organic matter had been removed; percolation of the emulsion and subsequent elution with a series of solvents resulted in the isolation of the separate components. Emulsions stabilised by sodium cetyl sulphate were analyzed successfully by this method; De-Acidite FF was used in the presence of cetyltrimethylammonium bromide. Using columns of Biodeminrolit (an intimate mixture of Zeo-Karb 225 and De-Acidite FF), percolation of lanolin—Lissapol N emulsions containing up to 1% of sodium chloride gave clear liquors, which on evaporation left no residue; columns containing powdered animal charcoal were equally effective but the Lissapol N was held too firmly for successful solvent elution. Lissapol N—soap-lanolin emulsions could be estimated accurately using a combination of the above methods. *Thru J. Pharmacy & Pharmacology, 7, 12, 1080(1955)*

The Action of Ammonium Thioglycolate on Human Hair. W. Schultheis and Fuhrmann (Peha-Werk G. m. b. H., Forchheim, Ger.). Parfumarie u. Kosmetik *31*, 114-18 (1950); Chem. Zentr. *1952*, 456.—Comparison of the load-elongation diagrams for untreated women's hair with those for hair treated with NH_4 thioglycolate indicated that hair is not to be regarded as a uniform chem. substance. The glycolic acid does not affect the actual structure of the hair cell but only softens or dissolves the intermediate binding substance, probably by the splitting off of cystine chains. *Thru C.A. 49, 12784a*

Action of Chlorophyll-Containing Dentrifices on Mouth Lactobacilli. H. Harnisch (Univ. Marburg, Ger.). Profilassi carie dentale, 1° Simposio intern., 216-20(1955).—Boys who used for 10 weeks a dentifrice contg. 0.3% chlorophyll showed a 60 and 48% reduction of, resp., lactobacilli and streptococci in the mouth. *Thru C.A. 49, 12784b*

A Study of Emulsification with Ultrasonic Waves II. Harold M. Beal and Donald M. Skauen. J. Am. Pharm. Assn. *44*, 490 (1955).—Some factors influencing emulsification by the application of ultrasonic energy such as temperature and time of exposure are described. The emulsifying agents employed, listed in order of effectiveness, include hard soap, polyethylene glycol 400 monostearate U. S. P., polysorbate 80 U. S. U., accacia U. S. P., sodium lauryl sulfate U. S. P., and tragacanth U. S. P.

The Effect of Chlorophyllins on Various Odorants as Measured by Surface Tension Changes of Liquids. J. A .Campbell and J. E. Christian. J. Am. Pharm. Assn. *44*, 504 (1955).—The effect of chlorophyllins on various odorants was studied using an improved surface tension method for the detection of odorant substances. It was found that certain odorants could be detected and measured by the technique while others could not and that the effect of chlorophyllins on the various odorants could be studied by the method employed.

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Separation of Lanolin from Wool Fat. M. Kh. Gluzman, B. I. Dashevskaya, and M. D. Yavlinskii (Sci. Research Chem.-Pharm. Inst., Kharkov). Masloboino-Zhiroyaya Prom. *20*, No. 4, 22-6(1955). —The method is based on an observation that yield (I) of lanolin is detd. primarily by the neutralization procedure employed, and that I is increased from 34-39 to 51-56.7% when a 2-stage neutralization process (II) is used. II is described as follows: crude lanolin, sepd. from wool fat after treatment with Berthollet salt and H_2SO_4, is treated with 0.5% calcined soda, boiled in 1% H_2SO_4, and centrifuged. The free fatty acids in lanolin are then neutralized with 20-5% NaOH soln. and dry calcined soda. After the addn. of alc., the resulting mass is heated, sepd., and the lanolin is washed free of soap, treated with infusorial earth, and filtered prior to storage. *Thru C.A. 49, 13667b*

Paper-Chromatographic Detection of Antioxidants. K. F. Gander (Margarine-Union A.-G., Hamburg, Ger.). Fette-Seifen-Anstrichmittel *57*, 423-5(1955).—Dissolve 40 g. of fat in 200 ml. petr. ether, shake with 20ml. of EtOH for 3 min., and sep. EtOH layer. Place up to 5 drops of the EtOH soln. on a chromatographic paper, drying after each drop. Develop by ascending chromatography, with a suitable solvent (4 mixts. are given), dry and spray with color developer, consisting of (a) alc. $AgNO_3$ followed by 1% NH Oh or (b) 2% aq. borax soln. followed by 0.01% 2,6-dichloroquinone chloroimide. Identification is by color and R_f values. Antioxidants identified were ethyl gallate, butyl gallate, dodecyl gallate, nordihydroguaiaretic acid, propyl gallate, butylhydroxyanisole, norconidendrin, tetramethylthiuramdisulfide, quercetin, ascorbyl palmitate, and a-tocopherol. *Thru C.A. 49, 13667h*

The Quality of Domestic (Japanese) Soaps at Present. Seiichi Ueno, Toru Hidaka, and Isamu Sakakibara (Kinki Univ., Fuse City, Osaka) J. Japan Oil Chemists' Soc. *4*, 30-2(1955).—Analyses are given for moisture, combined and free fatty acids, combined and free alkali, neutral fat plus unsaponifiable matter, EtOH-insol. matter, color, and neutralization no., I no., and m.p. of combined fatty acids for com. toilet and laundry soaps manufd. in 1946 and 1952. Specific surface tension of 0.25 and 0.5% solns. at 20, 40, and 60° are also tabulated for 1952 soaps. *Thru C.A. 49, 13671g*

Antiactinic Property of Antipyrine. M. I. Quiroga and P. H. Magnin. Actas Dermo-Sifiliog. (Madrid) *44*, 399-404 (1953); Excerpta Med., Sect. XIII, *8*, 135(1954).— Two salves were used in the expts., Ruggles cream and Aqualane, with the following results: (1) 5% antipyrine acts as an antiactinic of the first order. (2) Its antisolar power remains unchanged after 4 hrs. of application. (3) The results with thicknesses of cream of from 0.02 to 0.08 mm. are similar. (4) It is very useful in lupus erythematosus, herper, porphyrias, and in individuals extremely sensitive to solar radiation. (5) It can be used to facilitate tanning, but then its concn. must be graduated. (6) It is excellent from a cosmetic point of view, with the only drawback of not being sol. in oil. *Thru C.A. 49, 13593b*

Analytical Study of Anise Liqueurs. Consuelo Berrios Montenegro (Univ. nacl. mayor San Marcos, Lima, Peru). Anales fac. farm. y bioquim., Univ. nacl. mayor San Marcos, (Lima, Peru) *4*, 61-5(1953).—The differences between a Peruvian and a foreign liqueur are very slight. The foreign liqueur contains the natural essential oil, while the Peruvian one contains artificial essence. *Thru C.A. 49, 13590c*

Neomycin Release from Selected Ointment Bases. Wendell T. Hill, Jr., John F. Bester, and Orville H. Miller (Univ. of S. California, Los Angeles). Drug Standards *23*, 80-6(1955).—Twenty-six ointment bases contg. 0.5% neomycin (I) were evaluated for stability, compatibility, and release of I; the latter was measured by the agar plate method. Eight of the ointments contg. anionic substances were incompatible with I. The washable bases, jellies, and Span base showed the greatest release of I. I in H_2O-contg. bases was stable for 30 days but showed slight decreases in potency after 60 days. *Thru C.A. 49, 13593g*

Tenderizing of Meat. Juan Cardona Miro and Antonio Colomer Pujol. Span. 211,836, May 1, 1954. A mixt. of 80% NaCl, 10% dextrose, and 10% pepsin is dusted on meat, game, or fish, or mixed with ground meats. Large pieces can be pierced to get some of the enzyme into the mass. Treatment before cooking, with cold storage up to 24 hrs., is described. The pepsin predigest albuminoids to peptones, making the meat easier to chew and digest. *Thru C.A. 49, 13551e*

Tenderizing of Meat. Maria Teresa de la Puente Poch. Span. 214,226, Apr. 17, 1954. Starch, NaOH soln., and papain are mixed, dried at 40-50° to a granular state, and sprinkled on meats. Digestibility and nutrition are improved by the action of papain, and the absense of NaCl permits use even in salt-restricted diets. Thus, 550 g. NaOH and 16 l. H_2O were mixed. Papain (9 kg.) was dissolved in this, 187 kg. potato starch added, and the whole mixed in a rotary mill. The granules were sieved, dried in a stream of air at 50°, sieved again, and packaged hermetically. Cooking time is shortened for meat treated with this mixt., cheaper grades of meat can be used, and the neutralized papain-starch is itself a food. *Thru C.A. 49, 13551d*

Spices from Black Pepper Berries. Harry R. Ansel (to Wm. J. Stange Co.). *U.S. 2,713,000* July 12, 1955. Peppercorn berries are sepd. by air flotation into several fractions. The fraction of the lowest sp. gr. but contg. the highest percentage of oleoresin is subjected to solvent extn. for further processing into spice pastes. The fractions of higher sp. gr. are used in the prepn. of black or white ground pepper. *Thru C.A. 49, 13552d*

Paper Chromatographic Studies on Some Preservatives. W. Clemens (Zentrallab. Margarine-Union A.-G., Hamburg-Bahrenfeld, Ger.). Fette-Seifen-Anstrichmittel *57*, 109-11 (1955).—Experimenting with test substances, methods for the paper chromatographic detn. of various preservatives were developed. Benzoic acid, dehydroacetic acid, and a mixt. of 60% p-chlorobenzoic acid and 40% of benzoic acid as well as their Na salts are easily identified by unidimensional paper chromatography with NH_3-satd. butanol as solvent and developing the chromatogram with approx. 0.05% alc. soln. of bromocresol green. Methyl, ethyl, and propyl esters of p-hydroxybenzoic acid can be detd. by paper chromatography with a 1:1 mixt. of methanol and water as solvent and neutral red soln. for developing the chromatogram. The method is applied in the qual. detn. of benzoic acid and dehydroacetic acid in margarine. Also dehydroacetic acid in the lacquer coating of Al foli can be detd. qualitatively. Sensitivity and R_f values are given. *Thru C.A. 49, 13542g*

Paper Chromatography to Prove Artificial Increase of the Formol Number. R. ter Heide (Chem. Fabriek "Naarden," Naarden, Neth.). Conserva *3*, 377-8 (1955).—The formal no. in fruit juices is detd. by bringing the juice to pH 9.0, adding 40% formol soln., and titration with KOH to pH 9.0. To detect adulteration of fruit juice by amino acid, the formol no. of a sample and that of authentic juice are detd. and are made equal by diln. Two-dimensional chromatograms are made with a mixt. of butanol 4, acetic acid 1, and water 5 or 2-butanol 75, formic acid (88%) 15, and water 10, in one direction and 80% phenol in the other direction, and as reagent 0.5% ninhydrin in 96% alc. Abnormally large spots of the added amino acids appear. Sugars and colors do not interfere. *Thru C.A. 49, 13546f*

Some Aspects of Experimental Poisoning with p-Phenylenediamine and Its Mechanism. G. Avezzu and P. Ottaviani. Arch. med. int. (Parma) *4*, 205-22 (1952); Excerpta Med., Sect. II, *7*, 483 (1954).—O. and T. had previously reported a case of aplastic anemia following the use of a hair dye Contg. p-phenylenediamine (I) in a 61-year old woman who was in the habit of taking drugs of the amidopyrine type. The present study yielded histological evidence of damage produced by I in various tissues of rats and mice. It is concluded that the hematopathy must be due partly to an endogenous factor and more especially to an exogenous effect. The mechanism of the toxic action is discussed. *Thru C.A. 49, 13511d*

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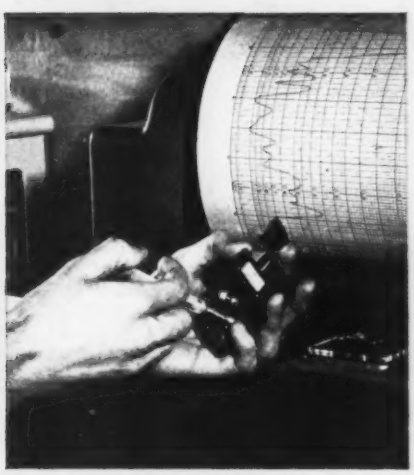

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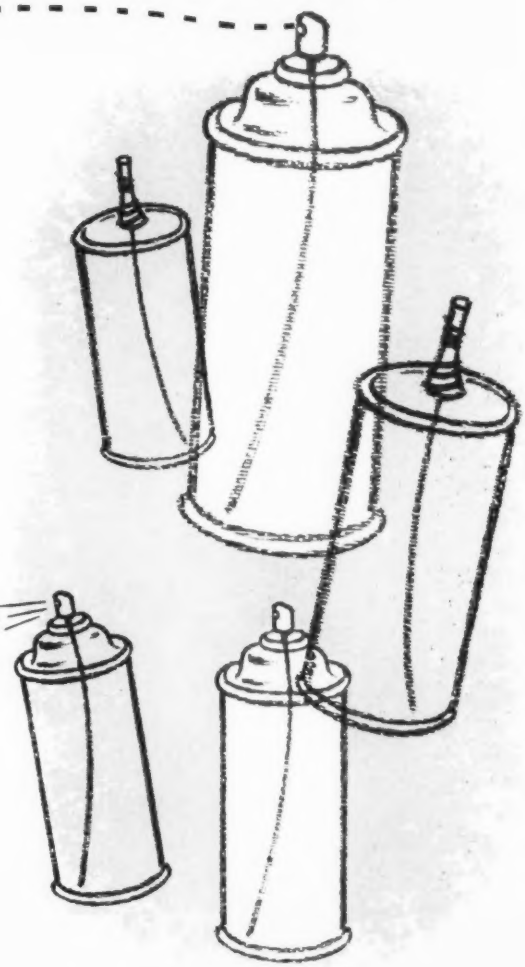

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News and Events

Lehn & Fink Buys Ogilvie Sisters

Lehn & Fink Products Corp. has purchased the assets of Ogilvie Sisters, and will place the nationally-known line of hair treatment and grooming aids under the management of the Dorothy Gray Sales Division, which will integrate the Ogilvie Sisters sales and distribution programs with its own line of beauty preparations.

Ogilvie Sisters, established 46 years ago, has had wide distribution in the United States and Canada. Its items make up one of the most complete lines of hair and scalp preparations, special shampoos and hair beauty aids. It is the only major line in its field sold exclusively through drug and department stores. Manufacturing is being moved from the present Ogilvie Sisters factory in New York to the Lehn & Fink plant at Bloomfield, N.J. Transfer and integration is under the direction of Edmund J. Dempsey, general manager of manufacturing for Lehn & Fink.

Lawrence W. Carter, Ogilvie Sisters sales manager, is joining the Dorothy Gray sales headquarters staff where he will be concerned with transferring sales activities to Dorothy Gray. The three Ogilvie Sisters, Clara O. MacInnis, Mabel O. Carter and Georgina O. Tweddle, are being retained as consultants to Dorothy Gray.

Warner-Lambert May Get Nepera Chemical Co.

Warner-Lambert Pharmaceutical Co. has reached an agreement with Nepera Chemical Co. for the acquisition of the entire capital stock of Nepera and the remaining stock interest in a majority-owned subsidiary of Nepera. The acquisition will be by the exchange of Warner-Lambert common and preferred stock.

Nepera, located at Harriman, N.Y., produces a variety of ethical specialties as well as a number of bulk fine chemicals. A subsidiary, Anahist Co., markets the Anahist and Super Anahist cold remedies.

Breck Files Fair Trade Actions against 8 Stores

Suits have been filed by the attorneys for John H. Breck, Inc., against eight New York City firms seeking temporary injunctions barring sale of Breck items below fair trade prices, $10,000 damages, and attorney's fees.

GIVAUDAN-DELAWANNA TENDERS ANNUAL FALL RECEPTION

More than three hundred members of the soap, perfume, cosmetic and allied industries attended the annual fall reception and cocktail party tendered by Givaudan-Delawanna, Inc., on November 14 at the University Club in New York City. Among the prominent men in the industries were (left to right) Fred Eichel of Givaudan; Gilbert Leigh of Colgate-Palmolive Co.; Everett Kilmer, Lever Bros.; A. T. Fiore and George Warren, both of Givaudan; and George Uhe.

Henry D. Bloom of Sheffield Co. Retires

This veteran representative of the Sheffield Co. in New York, Henry D. Bloom, retired November 1 from business after 25 years of service with Sheffield. Prior to his association with the Sheffield Co. in 1931, Mr. Bloom was vice-president and treasurer of the Omega Chemical Co.

Henry D. Bloom

Mr. Bloom is well known to hundreds of buyers of major drug and department stores. An active Mason, he was recently awarded the 25-year Masonic Service Medal by the New York State Grand Lodge. He says that he is looking forward to having more time to enjoy traveling and many outside interests with his wife, Ida A. Bloom.

Lanolin Plus, Inc. Buys Chicago Firm

Lanolin Plus, Inc., has purchased State Pharmacal Co., Chicago, makers of "All in One" reducing products, and other proprietaries. Jack H. Mathis will continue as president of State Pharmacal, which will operate as a subsidiary of Lanolin Plus.

F. V. Wells Honored By Italian Scientists

F. V. Wells, editor of *Soap, Perfumery & Cosmetics*, on November 2 received a letter from the Comitato Italiano di Estetica e Cosmetologia, through the intermediary of Dr. Emma Fenaroli, informing him that he had been elected a Socio d'onore (honorary member) in consideration of his large number of concrete contributions made in the field of beauty treatment and cosmetology.

Mr. Wells, in expressing his thanks for the honor, commended the Italian Society for its high standing, both nationally and internationally, and of its continually increasing scope and importance in the development of Italian and European cosmetics. Several of its leading members have made contributions of profound originality and significance to the contemporary science of cosmetology. To be made a honorary member of such a body, he added, was a distinction that brings a renewed sense of responsibility as well as a great measure of encouragement and personal satisfaction.

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Pure research into formulae and fabrication of glass, *packaging research* into processing and handling methods in customer plants, and *market research* into consumer attitudes, add up to greater specific value for your packaging dollar.

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The package that takes your product to market must take *three* needs into account. Considerations of its function in the retail store, its operating efficiency and its consumer utility all become a part of the prescription for an Owens-Illinois package.

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Versatility of facilities and talents points to Owens-Illinois as your best source of supply for a wide range of specialized needs: containers where beauty, utility and tradition are blended in the proportions required by different product classifications.

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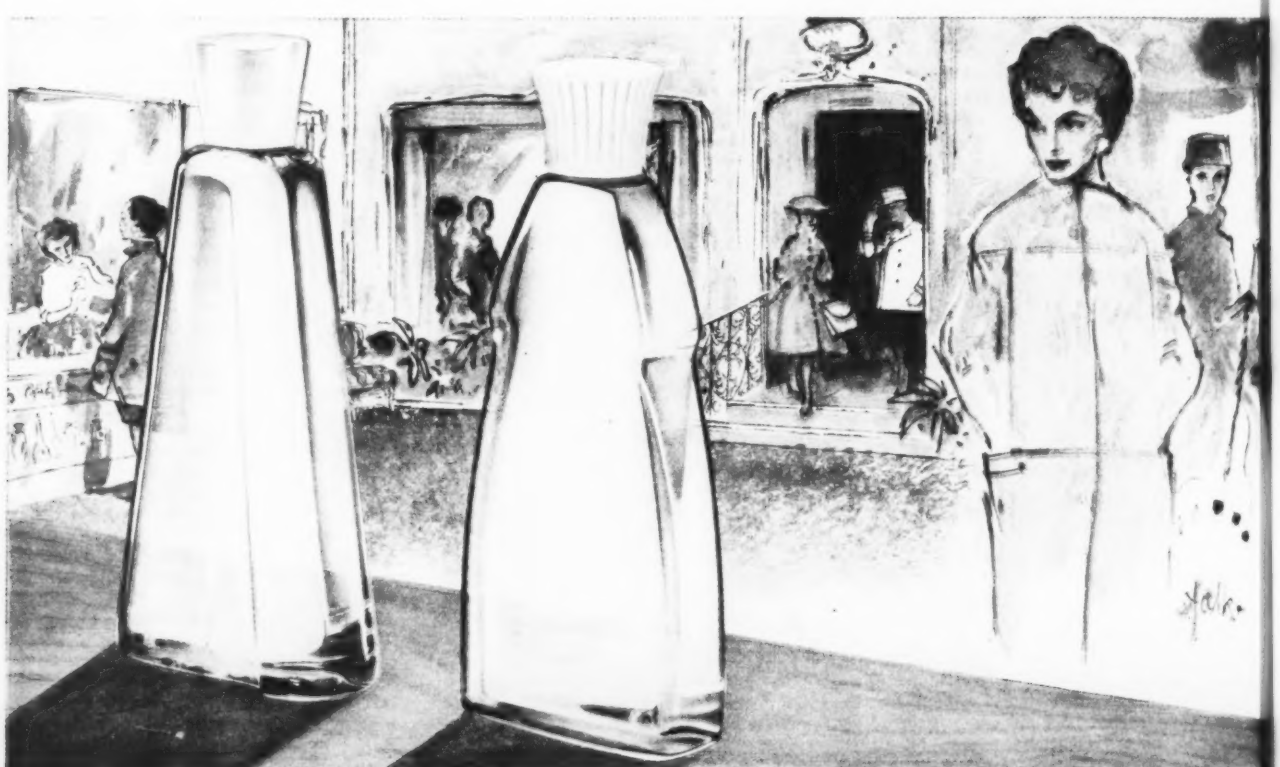

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Know-how as to the best available liner and closure—best for packing, displaying, or using a specific product—may well be one of the most important single points through which expert packaging counsel will reward you many times over.

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With emphasis on the word "needed," Owens-Illinois specialists are keenly aware of sales benefits possible through use of plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

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Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and retail warehouse as well as on your own filling line and in transit. Owens-Illinois is pioneering such developments.

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. . . handsomely fashioned expressly for your product by Owens-Illinois container design service!

The correct container ranks high among the advantages your product must have. That's why Owens-Illinois stresses its Container Design Service.

Through form, color, over-all appearance, the container developed for your product by our experienced designers and packaging experts will do much to draw attention to your product—express its quality and character—compel vital sales action. The correct container, too, will help win repeat sales by protecting your product—by keeping it fresh—and, perhaps more important, by making it always easy to use.

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This indispensable base, with the odor of fresh natural flowers, has a world-wide reputation.

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C.S.M.A. Holds 43rd Annual Meeting

Aerosols and Other Topics are Discussed at the Chemical Specialties Manufacturers Assn. Meeting

Representatives from the leading chemical manufacturing concerns of the country converged on the Mayflower Hotel, in Washington, D. C., last December 3-5, to attend the 43rd annual meeting of the Chemical Specialties Manufacturers Assn., Inc. In addition to such affairs as the election of officers, annual aerosol award contest, and social activities, those who attended heard a program on the latest developments in the chemical industry in the following divisions: aerosol; automotive; insecticide; soap, detergents and sanitary chemical products; waxes and floor finishes; disinfectants and sanitizers. Besides the profit received from the reports by authorities in the respective fields, the members gain the great benefit of coming in contact with leaders in the field and of hearing what they had to say informally on current trends.

Harry E. Peterson is Elected President

Harry E. Peterson, president of Peterson Filling & Packaging Co., was named president of the Chemical Specialties Manufacturers' Assn. during the meeting. He succeeds Dr. Emil G. Klarmann, of Lehn & Fink Products Co.

Other officers appointed at the meeting are: James E. Ferris, 1st vice president; Donald M. King, 2nd vice president; P. C. Reilly, treasurer; K. W. Hamilton, secretary.

Dr. Klarmann, the retiring president, was named to a three-year term on the association's board of governors, along with Anton E. Budner and Russel G. Puhle.

Emphasis on Aerosols Reflected in Meeting

The increasing importance of aerosols to the chemical industry was reflected in the well attended aerosol division meetings, the large increase in the number of entries in the aerosol packaging contest (there were some 200 participants, both from the United States and abroad), and in the unusual amount of conversation on the subject heard in informal conversations.

At the meeting of the Aerosol Division the following papers were presented:

Address of the division chairman, by Charles E. Beach.

A review of the Aerosol Scientific Committee's Activities, by William E. Baulieu, chairman.

Insecticidal Performance of Strobane Aerosols as a Function of Particle Size and Formulation of Sprays, by John C. McCool.

Analysis of Volatile Aerosol Constituents, by M. J. Root and M. J. Maury.

Water Based Aerosols, by Lee D. Callans.

The following addresses were presented at a joint meeting of the Aerosol and Automotive divisions:

Pressurized Packages for Automotive Use, by J. Myron Kimmel.

DuPont Survey—Aerosols, by R. A. Crane.

Fragrance in Aerosols, by Adolph Dingfelder.

The Versatility of Chlorothene in Aerosols, by J. W. Barber.

The Technical Evaluation of Metal Containers for Automotive Products, by G. E. Curtis and R. G. Nugent.

Again and again the speakers emphasized the unprecedented reception by the public of this form of packaging, and predicted a practically unlimited market on the basis of past experience.

Aerosol Marketers Told To Improve Merchandising

Aerosol marketers were told by Ralph A. Crane, market analysis manager of the Kinetic Chemicals Division of DuPont Co., that while they've boosted their annual sales in only 10 years to $300 million, that they've missed as much as 85 per cent of the market potential in many product categories because of poor merchandising. Mr. Crane's remarks were based on a survey completed only last month which comprised a national probability sample of all U.S. urban households. The findings, he said, represent an accurate cross-section of at least 30 million households, or about 61 per cent of the nation's population.

Among facts revealed by the survey was that while 85 per cent of the nation's housewives in urban areas use a personal deodorant for antiperspirant, only one-third of that 85 per cent know that such a product is now available in an aerosol package, despite the fact that they were first produced in 1951. Of those who know that an aerosol deodorant is available, only 58 per cent have actually purchased one, yet those who have tried the aerosol type indicate a two-to-one preference for the pressurized product because of economy, ease of application, cleanliness and greater effectiveness.

Mr. Crane believed that through product improvement and increased selling, advertising and merchandising efforts the percentage of users could be doubled, and additional retail sales of at least $10 million could be achieved.

On the plus side for merchandisers, he cited the aerosol hair sprays as an example of successful merchandising. Sales of all types of hair preparations last year amounted to about $160 million, with the aerosol type package being familiar to 90 per cent of the users and accounting for about half of all the sales of hair preparations.

Analysis of Material for Aerosol Hair Lacquers

J. W. Barber of the Dow Chemical Co. presented a paper on a new material which he described as promising for hair lacquer formulations in which its low toxic hazard and solvent properties are featured. Chlorothene is a registered trademark for an inhibited grade of methyl chloroform or 1,1,1,-trichloroethane.

In summary, Mr. Barber characterized the material as having excellent solvent activity and yet giving few valve problems. As a pressure depressant it will conserve propellent 12 and give lower pressures at high temperatures, increasing the safety factor of the formulation. Chlorothene will also tolerate considerable dissolved water without can corrosion.

Grand Award in Aerosol Packaging Contest Goes to Air Spray by Lactopine for Design and Attractiveness

A lavender-scented aerosol room deodorant, "Air Spray by Lactopine," produced and marketed in the United States by Swiss Pine Importing Co., took top honors in the aerosol packaging contest for best design and attractiveness. It also won first prize in the aerosol room deodorant class, one of ten product categories in which packaging awards were made. The package is violet in color, with white accents and a pure white, full cylindrical, plastic overcap.

Two foreign-produced items were winners in the product categories: "Bib" Window Cleaner, by Societe Elekal, of Paris, in the household products category; and Matinee Hair Spray, by Scent de Paris Co. of Toronto, Canada, in the hair preparations classification. Award plaques were presented to the winners at the luncheon meeting on December 4.

The other winners were:

Insecticides: Avon Mothproofer, by Avon Products, Inc.

Paints, enamels and protective coatings: Krylon Touch-Up Spray Enamel, by Krylon, Inc.

Shaving preparations: Rex Witch Hazel Shaving Cream, by Rexall Drug Co.

Personal products: Tartan Sun Lotion, by McKesson & Robbins, Inc.

Artificial snows and novelties: "Christmas Snow" spray by Easy Way Products Corp.

Glass and plastic aerosols: Angelique Black Satin Spray Cologne by Angelique & Co., Inc.

C.S.M.A. Meeting

Adolph Dingfelder of Felton Chemical Co. Describes the Role of Fragrance in Relation to Aerosols

Adolph Dingfelder, Felton Chemical Co., Inc., spoke before the joint Aerosol and Automotive Divisions session on, "Fragrance in Aerosols." After an introduction in which he stressed the importance of odors in the tremendous variety of aerosol products from insecticides to the most delicate perfume extracts and running the gamut of such incongruous items as pet sprays, athlete's foot remedies, shampoos, suntan lotions, Christmas snow and rug cleaners, he concluded that the aerosol industry could have achieved its success only with the close cooperation of the essential oil and aromatics industry, and the tireless research carried on in its perfume laboratories.

He then related briefly the principal hazards that the perfume chemist must contend with when developing a fragrance for an aerosol product. One of the most important is the solubility of the aromatic material in the propellent and its compatibility with the same. Incompatibility may cause any of the following: it may separate and not allow a homogenous mixture to escape from the valve; it may cloud; it may clog the valve; it may precipitate and distort the odor; in the case of alcoholic solutions such as colognes, where water may be used, it may cause hydrolysis. The selection of a perfume should never then be a hit and miss proposition.

Experience has taught the perfume chemist which materials are best compatible with the different types of propellents, and which must be eliminated from the formulation. A number of perfume houses have installed their own aerosol laboratories in order to create and check perfume materials for odor and for compatibility with aerosol ingredients.

The container itself is a potential source of trouble. Frequently a perfume oil will clog the valve or cause corrosion. Aerosol testing laboratories are equipped with tests to discover such defections.

There are many fascinating problems confronting the perfume chemist: One of the most interesting is the adaptation of the classic perfume, most of which contain materials not soluble in the propellent, to aerosol packaging. Others are deterioration caused by factors peculiar to the aerosol. Another is the maintenance of color in aerosol packaging, which is particularly important for perfumes and colognes packaged in glass containers.

One specific aerosol problem has to do with the action of the most commonly employed perfume fixatives, which have a tendency to discolor and to be resistant to solubility, and in addition cause irritation to the skin if sprayed in a fine mist. This problem has been solved by the development of new fixatives, both synthetic and natural.

Constant research has enabled perfume chemists to cope with every challenge, to the benefit of both the aerosol and perfume industries.

Mr. Dingfelder closed his address with reference to the new worlds to conquer which await the aerosol industry. Powdered products in aerosol form is almost accomplished. Another chapter will be the non-refrigerant type propellents, for use with items to be taken internally. And it is only a short step from those to the adaptation of products for consumption. This leads to flavor, and its many potential uses, which are not necessarily limited to the food field.

Mr. Dingfelder concluded that the producers of fragrance in all its varied forms and applications consider themselves an integral and important part of the young aerosol industry. The essential oil and aromatic industry is proud to be able to share in its progress and growth.

Say Chromatography Ideal for Aerosol Technology

In a paper by Morris J. Root and M. J. Maury, "Analysis of Volatile Aerosol Constituents," the authors declared that gas-liquid phase chromatography is practically tailor-made for the needs of aerosol technology to improve present products and for research and development of new products.

Analysis of the volatile components in aerosol products presented unusual problems, as they range in boiling points from as low as —21.7° F. for the propellents to over 100° F. for some of the solvents.

Gas-liquid partition chromatography permits taking a sample of .01 to .2 ml. liquid or .05 to 25 ml. gas at atmospheric or reduced pressures, separating it into liquid components, recording the qualitative and quantitative values and completing the operation in a matter of minutes with an accuracy of plus or minus a few tenths of one per cent. Furthermore, each component can be recovered for infra-red spectrophotometric analysis or mass spectrometry.

Commercial gas chromatographs are now available which utilize the liquid-gas partition chromatographic technique. Such instruments are particularly well suited for use in the aerosol industry for:

1. Identification and analysis of propellents and propellent mixtures.
2. Quality control of aerosol products.
3. Checking propellents and volatile components for contamination.
4. Detection of air in liquid and gaseous phases.
5. Analyzing liquid and gaseous phases of aerosol products.

Water Based Aerosols Important New Concept

In his talk, "Water Based Aerosols," Lee D. Callans, Allied Chemical and Dye Corp., told of an important new concept in aerosols which is now in the process of development. This is the water based aerosol, which Mr. Callans thinks will comprise a considerable portion of the aerosol market in a few years.

The dispersion type aqueous aerosol is not a solution and not an emulsion, but lies on the borderline between the two. It has all the advantages of the other kinds, Mr. Callans said, plus others. It is cheaper. It requires less propellent. Its action is consistent from either a full or nearly empty can.

At present, the big problem with the water based aerosol is the corrosion of the container, which Mr. Callans thinks will be answered in from three to twelve months.

By 1960 he predicts a large increase in the aerosol market, with the water based aerosol comprising a large share of the total.

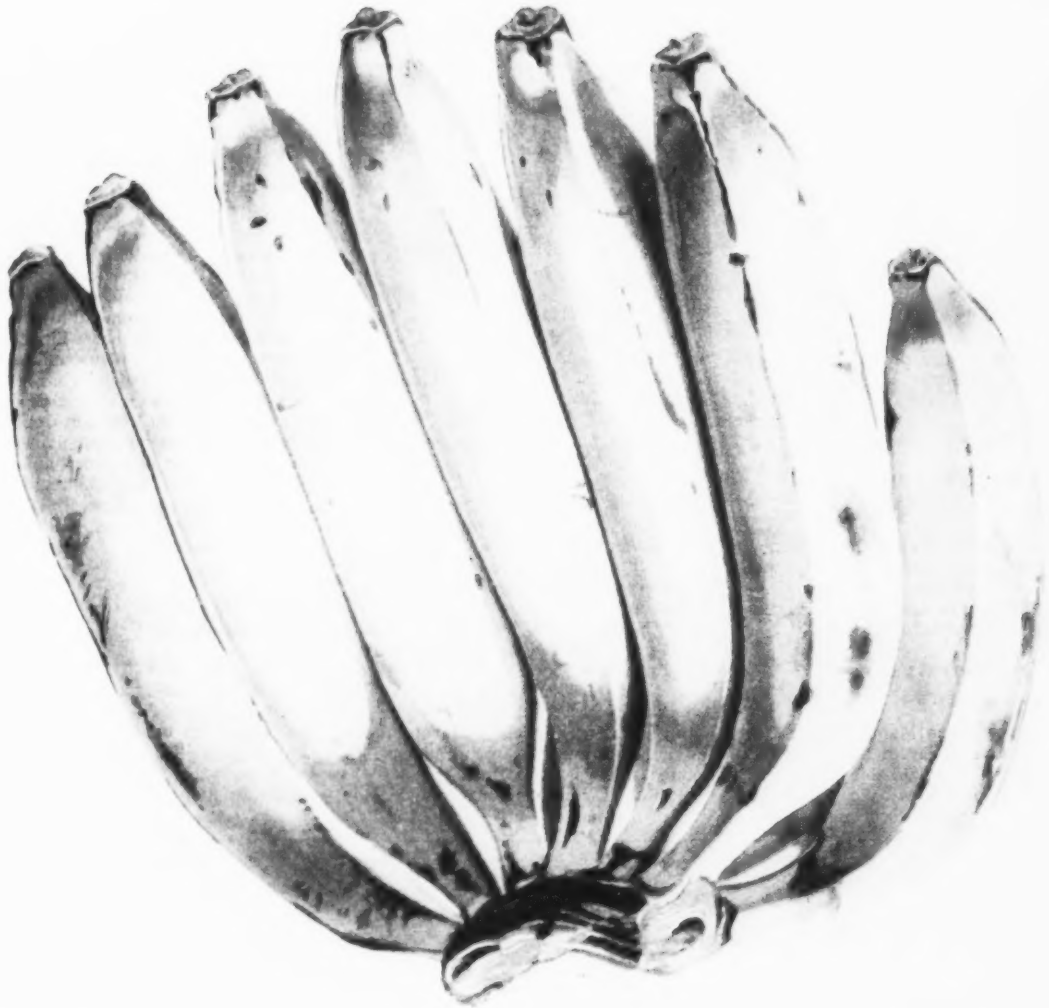
Aerosol Scientific Committee Activities are Reviewed

William E. Baulieu, Bridgeport Brass Co., chairman of the Aerosol Scientific committee, reported on the activities currently under way by the group. Its general objectives are:

1. To advise the Aerosol Division and Association on scientific matters concerning pressurized products.
2. To work out standard methods to be used in the evaluation of aerosol products.
3. To disseminate to the membership any information of a scientific nature that pertains to pressurized products.
4. To initiate and undertake work of a scientific nature that the committee believes to be of benefit to the aerosol industry.

The committee is composed of 43 members who represent as many different concerns of laboratories. Twelve additional concerns are represented on subcommittees. The people on the committee and subcommittees total 86.

The Personal Products Subcommittee, one of many, is headed by Victor deGiacomo. It is organized into several project groups set up on a geographical basis to facilitate close cooperation. Current work includes an attempt to develop standard formulations for aerosol cosmetic products. A project to obtain information on the compatibility of cosmetic materials with aerosol propellents is also contemplated, in addition to other interests.



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Synthetic Detergents to Replace Soap is Predicted

Within the next five to ten years synthetic detergents will substantially replace soap in the toilet bar and commercial laundry fields, Dr. Foster D. Snell, president of Foster D. Snell, Inc., said in an address in Cincinnati recently.

Prentiss Drug Co. Gets Sales Rights to Deodorant

Prentiss Drug & Chemical Co. has acquired exclusive sales rights to Meelium deodorant, one of the first offered in aerosol containers. Meelium is to be offered to the aerosol filling trade in the form of a concentrate for which purpose it is diluted with deodorized kerosene.

Parke Davis & Co. Selects Site for Medical Research Center

Parke, Davis & Co. will locate its new ten million dollar medical research center on a site near the campus of the University of Michigan in Ann Arbor. The center is to be completed in 1959.

Lucky Tiger Surveys Barbers for Styles in Men's Hair

The Lucky Tiger Manufacturing Co. is conducting a survey of barbers in the United States to get workable suggestions on men's hair styles and grooming habits. The company sent a carefully prepared questionnaire to 10,450 members of Associated Master Barbers and Beauticians of America. The purpose is to make men more style conscious. It is hoped to secure useful information on whether men change their hair styles to cover receding hair lines, cover bald spots and disfiguring bumps or whether new styles are designed to harmonize with the shape of the head or face.

Guide Posts for Selling to the Negro Market Pointed Out

For effectively selling to the Negro market Joseph Albright of the Curtiss Candy Co. offers these guide posts in a recent address.

1. Don't invest a dime in marketing programs for Negroes without first securing proper guidance. This may be had from a marketing member on your staff or a private organization.
2. Utilize Negro personnel for sales promotion.
3. Encourage the employment of more direct Negro salesmen where the program encompasses the need for direct sales.
4. Caution your advertising department to be extremely careful in beaming programs to Negroes.
5. Send representatives to marketing clinics in Negro colleges.
6. Tie marketing plans in with those of non-controversial organizations like churches, lodges, schools, etc.
7. Run a continuing survey and analysis of the market.

As a final warning Mr. Albright pointed out that when a Negro cannot associate or identify himself with a promotional campaign, don't expect him to support it; for there is no appeal to his interest.

International Conference on Scientific Information

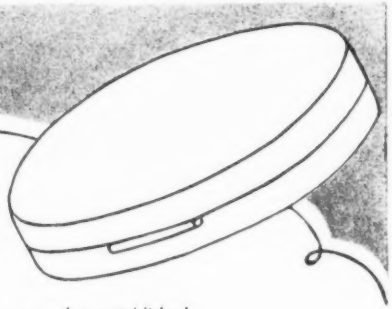
In order to provide a thorough discussion of present developments and research on the organization and dissemination of scientific information, an international conference will be held in Washington, D. C. in November 1958.

The meeting, which is to be sponsored by the National Science Foundation, the National Research Council, and the American Documentation Institute, is an attempt to overcome mounting difficulties in scientific communication resulting from the increasing tempo of research activity and the ensuing flood of scientific publications.

National Chemical Credit Assn. Sponsors Conference

The National Chemical Credit Assn. is again sponsoring the "Fourth Annual Chemical Credit Men's Convention," to be held at the Benjamin Franklin Hotel, Philadelphia, Pa., February 26-28, 1957. William Busch, Chas. Pfizer & Co., Inc., is chairman of the Eastern Division Committee.

Plymouth



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Its exceptional silky, soft smoothness, the complete absence of odor and the extremely fine particle size plus its extraordinary adhesiveness, they say, make it an outstanding additive. As little as 5%, added to your formula, will demonstrate these qualities, although it is being used in some face powder to the extent of 15%.

We believe this product has special value in pressed-face powders which have gained so much popularity recently.

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George Kolar, S.C.C. President Honored by New York Chapter

George Kolar, president of the Society of Cosmetic Chemists, was the guest of honor of the New York Chapter on the evening of November 28 at the annual President's Night meeting.

The affair was held in the Brass Rail restaurant, New York, and was well attended. Five former presidents of the S.C.C., Dr. Donald H. Powers, Dr. Sol Gershon, Dr. E. G. McDonough, Dr. Paul G. I. Lauffer, and Dr. Kenneth L. Russell were present as well as the President-elect Sabbat Strianse to honor Mr. Kolar.

Following the dinner President Kolar installed the following new officers of the chapter: Warren B. Dennis, Jr., chairman; Harry Isacoff, chairman-elect; Mrs. Maria Wiener, secretary; and Vincent J. Defeo, treasurer.

Mr. Kolar then gave an interesting and well considered talk on the future of the cosmetic industry in which he made some astute predictions as to what may be expected in the years to come.

Perfumers Enjoy Lecture on Bees and Royal Jelly

R. B. Willson, chairman of the Honey Industry Council of America and a former faculty member of Cornell University, where he specialized in biology and its related sciences, discussed the "Biological Aspects of Bees and Flowers" at the November meeting of the American Society of Perfumers. He also presented a color film on the life of the bee and discussed various aspects of royal jelly. In the absence of President Christian F. Wight, Vice President Pierre Bouillette presided with his usual skill and humor.

Tribute to F. H. Ungerer at Conclusion of Sales Conference

The final evening of the annual conference of all Ungerer & Co. sales representatives and executives from all branches and the headquarters in New York was given over to a company party in a West Orange, N. J. restaurant on the evening of November 13. Informal gayety marked the occasion which came to a close with a sumptuous banquet. After the dinner Kenneth Voorhees in a brief but well considered speech expressed the feeling of all members of the organization in a tribute to Frederick H. Ungerer, head of the company, who was unable to be present on account of illness. The hearty round of applause which greeted the speech was trite evidence of the affection and respect in which Mr. Ungerer is held by the whole organization.

American Medical Assn. Symposium on Cosmetics

The symposium on cosmetics to be held December 27 in the Statler Hotel before the Pharmacy Section of the American Assn. for the Advancement of Science will be presented by the Committee on Cosmetics of the American Medical Assn.

GLASS CONTAINER MANUFACTURERS DISCUSS ADVERTISING

The current advertising and promotion program of the Glass Container Manufacturers Institute was a major topic of discussion during GCMI's recent semi-annual membership meeting in Phoenix. J. S. Heuisler of the Maryland Glass Corp., Roger H. Hetzel of the Armstrong Cork Co., and R. L. Cheney, GCMI marketing director, go over details of the program. Some 300 members and their wives attended the three-day glass container session.

The program includes an address by Dr. J. E. Christian of Purdue University, who will serve as moderator. The following papers will be presented: The New Role of Cosmetics, Veronica Conley; The Scientific Formulation of Cosmetics, Dr. Paul G. I. Lauffer; The Essentials of Skin Cleansing, Dr. Raymond R. Suskind; The Control of Axillary Sweating and Body Odors, Dr. Marion B. Sulzberger and Dr. Franz Herrmann; The Present Status of Pigment Forming Drugs, Dr. Aaron Learner; and Toxicity Problems of Cosmetics, Bernard E. Conley.

Those who will discuss the papers are Dr. Irvin H. Blank, Dr. Stephen Rothman, Dr. Carl Nelson and Dr. Howard Behrman.

SCC of Great Britain Hears Talk on Silicones

At the meeting of the Society of Cosmetic Chemists of Great Britain in November an address on "Silicones in the Cosmetic Industry" was delivered by T. W. Watson. As a general introduction the speaker provided a color film entitled, "What's a Silicone?"

After the film Mr. Watson discussed the synthesis of different types and outlined their special properties which might suit them for application in the cosmetic industry. The liquids, for example, are water-white oily substances, resistant to rancidity, with viscosities ranging from values less than that of water to extremely viscous fluids. They have low volatility and their relatively low surface tension enables them to spread well on the skin to form thin invisible continuous films which are water repellent.

A lively discussion on various aspects of the subject, such as cost and interference with skin metabolism, followed the talk.

Revlon Launching New Products Men's Line and Baby Powder

Revlon Inc. will market test five new products in 1957. Next Spring the company will begin advertising its Top Brass, a hair dressing for men, and Hi-and-Dri, a deodorant for men. It will also promote a dandruff shampoo and a hair preparation. A baby powder will also be tested as companion to Silicare, a baby lotion already on the market. Eye drops, with a cosmetic approach, will also be tested.

Mennen Co. Slanting Ads at Expectant Mothers

The baby product advertising of the Mennen Co. in 1957 will be directed to expectant mothers. The mother-to-be is a customer-to-be of baby products and hence the campaign will be addressed to Every Lady-in-Waiting and will aim to demonstrate the leadership of Mennen products in the baby field.

Industry People Protest Cosmetic Excise Tax Shift

Northam Warren Jr., representing the Toilet Goods Assn.; Janet Myers, representing the Cosmetic Career Women; and Leonard J. Calhoun who testified for Avon Products Inc., appeared before the subcommittee of the House Ways and Means Committee during the last week of November to protest a shift of the 10% cosmetic excise tax from retailers to manufacturers.

Richard Malmstrom and Irving Colbert of N. I. Malmstrom & Co., Brooklyn, N. Y., relaxing at the Sahara in Las Vegas, Nevada, during their nationwide tour to introduce Nimco products.

S. B. Penick Announces Additions to Staff

S. B. Penick & Co. has announced the addition of the following staff members: James B. Philip, Villanova University, formerly with Thomas A. Edison, Inc., who will work with the product development staff at Lyndhurst; Gerald S. De Angelo, St. Peter's College, analytical control laboratory at Lyndhurst; Donald W. Sands, Purdue, formerly with DuPont, assigned to the Lyndhurst production group.

Pierre Papazian has been engaged as research librarian. A graduate of Brown University, Mr. Papazian has had previous experience with public libraries at Baltimore, Md. and Orange, N. J.

P. T. Petley & Co. Has New Address

P. T. Petley & Co., Ltd., moved on November 20 to larger premises at 53/54 St. John's Square, Clerkenwell, London, E. C. 1, England. The telephone number is CLE 4553/6.

International Conference on Hair in London in August

An international conference, arranged by Dr. William Montagna, on "The Biology of the Hair Follicle and Growth of Hair" will be held by the British Society for Research on Ageing at the Royal Society of Medicine, London, England, August 7-9, 1957.

The conference will deal with the gross and microscopic anatomy, chemistry and histochemistry of the hair follicle and the hair, studies on mitosis of the hair follicle and the effects of nutrition and hormones on hair growth, vascularity, and patterns of growth, production of pigment, regeneration and de novo formation of hair follicles. The proceedings of the conference will be published in book form. There will be a subscription dinner for those attending the conference. Admission will be by ticket only.

Tickets may be obtained free by writing to the Hon. Secretary, British Society for Research on Ageing, Dr. G. H. Bourne, London Hospital Medical College, Whitechapel, London, E. 1, England, before April 30, 1957.

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AEROSOL NEWS

Non-Shatter Aerosol Containers Made of Nylon to be Offered

New non-shattering aerosol containers made of nylon in plastic form will soon be available. The use of Zytel nylon resin in the manufacture of aerosol bottles makes possible a wide range of design possibilities with respect to shape and color, which is molded in. The nylon aerosol container bounces when dropped. Zytel nylon resin is manufactured by E. I. duPont de Nemours & Co.

Peterson Filling & Packaging Engages New Research Chemist

Peterson Filling & Packaging Co., Danville, Ill., has announced that Miss Mary Saunders has joined the research department. Miss Saunders was graduated from Indiana University with the degree of A.B. in chemistry. For the past twelve years she has been associated with two of the largest chemical manufacturing companies in the country.

G. Barr & Co. Installs Five Propellent Storage Tanks

G. Barr & Co. announces that it has installed five propellent storage tanks with a combined capacity of 380,000 lbs. in its Chicago plant. The new tanks increase the plant's total propellent storage capacity to almost 900,000 lbs. In addition to increasing storage volume the new tanks offer the advantage of stocking various mixtures of propellents. Thus, a ready mixed supply enables filling various product formulations without delay during an actual packaging run. Permanent supply tanks have also been installed in the company's plants in New York and Los Angeles.

Successful Use of Petroleum Hydrocarbons in Propellents

Continental Filling Corp., Danville, Ill., announces the commercially successful use of petroleum hydrocarbons in propellents for three phase low pressure aerosols. The product is now being marketed nationally. The company has also completed the installation of new aerosol cold filling equipment for hair lacquer in cans and modernized its cold fill hair lacquer line for bottles.

Peerless Tube Co. Offers New One Piece Aerosol Container

Peerless Tube Co. is offering a new one piece, light weight aluminum aerosol container with no bottom seam and with a small aperture at the top in which the valve is sealed so as to eliminate leakage. It is an extruded container and is available in various sizes down to one inch in length. With these containers the company feels that a new field for aerosol perfumes, colognes and deodorants has been developed in purse and pocket sizes. The aerosol may be decorated with up to four colors on the base coat; and may be buffed and either anodized or coated. Large scale production is planned by January.

Aerosol Packaging Firm Opens Norristown, Pa. Plant

Stalfort Pressure-Pak Co. of Pennsylvania, a newly formed subsidiary of John C. Stalfort & Sons Co. of Baltimore, has opened a 43,000 sq. ft. plant in Norristown, Pa. Charles E. Beach, who is president of the new company, is vice president of the parent company.

Lodes Aerosol Consultants Inc. Organized by Frederick G. Lodes

A new consultant firm to meet the needs of the aerosol industry has been organized by Frederick G. Lodes with offices at 730 Fifth Ave., New York 20, N.Y. The firm will specialize in technical assistance, consultation regarding the foreign aerosol market, and surveys related to proposed business acquisitions. For the past decade Mr. Lodes has been active in the aerosol industry.

Chicago Perfumers Hold 50th Anniversary Celebration

The Chicago Perfumery, Soap and Extract Assn. celebrated its Golden Anniversary at the annual Christmas ball on December 15 in the grand ballroom of the Conrad Hilton Hotel, Chicago. The dinner dance was preceded by a cocktail party in the Normandy Lounge of the hotel. Decorations and entertainment were keyed to the 50th year theme, with each lady receiving a gift container filled with Golden Waltz cosmetics.

The Chicago Perfumery, Soap and Extract Assn. was founded in 1906 by a dozen Chicagoans engaged in the manufacture and sales of cosmetics, drugs, and allied products and services, and today consists of 400 men in these fields. E. R. Kuehne of Mallinckrodt Chemical Works is president for 1956. E. F. La Sarre is vice president and chairman of the entertainment committee.

Practical Cosmeticology Course Offered at J. M. Wright School

A course in practical cosmeticology will be offered at the J. M. Wright Technical School, Stamford, Conn., starting January 9. Evening sessions will be held on Wednesday from 6:30 to 9:30. Frank J. Steele, Ph.D., Chief Pharmacist at the Greenwich Hospital, will be the instructor. The training will be accomplished by lectures, demonstrations, examinations, discussions, and laboratory work.

The course will include creams; lotions; make-up; soaps; shampoos; shaving preparations; dental products; deodorants; toilet waters; bath, suntan, and manicure preparations; perfumes and the use of perfumes in beauty and toilet products. The marketing of perfumes and cosmetics will also be discussed.

Michigan Chemists Enjoy 1956 Christmas Party

The Chemical and Allied Industries Assn. of Michigan held its annual Christmas party on December 15 at the Sheraton Cadillac Hotel, Detroit, Michigan. The evening included a cocktail party, dinner and dancing. Member companies made cash contributions or suitable door prizes.

Charabot & Co. Appoints Mid-West Representative

Charabot & Co., Inc., has appointed Bridge Chemical Co., Inc., 2509 West Cermak Road, Chicago 8, Ill., as its representative for the states of Minnesota, Iowa, Illinois, Wisconsin, the western part of Michigan, and Indiana. The telephone number is Lafayette 3-8225.

Horace Titus Authors Article on French Painter

Horace Titus, son of Madame Helena Rubinstein, will have an original bylined feature in the January issue of Esquire magazine.

Titled "Jean Helion: Complete Circle," the article traces the life and career of this well-known French painter, whose work started as representational, then went entirely abstract, and is now gradually becoming more and more representational.

Horace Titus has always been interested in writing and painting; and his contributions to the Helena Rubinstein business have been mostly in the "creative" areas of advertising and general visual presentation.

Sonneborn & Sons Buys Mobil Oil Israel, Ltd.

Socony Mobil Oil Co., New York, has announced the sale of the business of Mobil Oil Israel, Ltd., an affiliate, to L. Sonneborn & Sons, New York. The transaction becomes effective December 31.

Sonneborn plans to expand the company's business, which is the marketing of a full line of petroleum products in Israel. The present employees of Mobil Oil Israel are expected to be retained.

Shulton Hosts Personnel from McKesson and Robbins

Shulton, Inc. was host to executives and sales force of the New Haven branch of McKesson and Robbins, Inc. The group toured the Shulton plant in Clifton, N.J., after which the members were feted at Toots Shor's in New York City.

Thomas W. Johnston Honored at Jewish Philanthropies Dinner

Leaders in the drug and cosmetic fields paid tribute to Thomas W. Johnston, senior vice president, L. Bamberger & Co., at the annual Federation of Jewish Philanthropies dinner recently. The largest audience in the history of the Federation's Cosmetic and Drug Division watched Mr. Johnston receive an engraved plaque for his many activities on behalf of the industry and civic philanthropic causes.

Brochure on Wholesaling Tells Story of Growth

"It's Good Business to Do Business with Wholesalers," is the title of a colorful fact brochure from the National Assn. of Wholesalers. Total wholesale trade has risen from 66.7 billion dollars in 1929 to 235 billion in 1954 and 1956 indicates a record peak of 285 billion. These and other vital facts on the important wholesale segment of our economy are portrayed.

Owens-Illinois Supplies the Latest Thing in Time Capsules

The craftsmen of Kimble Glass Co., subsidiary of Owens-Illinois, recently supplied a king-size ampul to house a big chunk of Memphis, Tenn., history for the next one hundred years. The principal contents of the ampul, made especially as a "Time Capsule" for the Centennial of the Mid-South Fair, are nearly 3,000 frames of microfilm, reproducing hundreds of documents and pictures designed to portray life in Memphis and the Mid-South today. The historical material was chosen by a special committee to show the people of 2056 what life was like a century earlier. To insure that the ampul will be opened at that time, Governor Frank Clement of Tennessee sent smaller ampuls containing information about the Centennial Time Capsule, and its precise latitude and longitude, to the other 47 state governors to hold in the archives of their states.

The five-pound glass container is 25 inches tall and six inches in diameter. It was designed as an airtight time-defying package.

TGA Issues Standards for Cosmetic Materials

The Board of Standards of the Toilet Goods Assn., Inc., has issued Specification No. 62, October 26, 1956, which defines and establishes standards for triethanolammonium lauryl sulfate; and Specification No. 63, October 29, 1956, which gives the same data for stearyl alcohol.

Patent for Micro Mist Spray Nozzle Issued to Risdon

The spray nozzle sold under the trade mark "Micro Mist" has been patented by the Risdon Manufacturing Co., Naugatuck, Conn. The patent number is 2,767,023. The nozzle was developed for use with water base and other products which will not mix with a propellent. Use of the Micro Mist, the company points out, permits a greater latitude in product formulation and gives excellent atomizing performance when used with conventional two-phase and ultra low pressure products.

Plan Continuing Federal Statistics Users' Conference

Plans to establish a continuing Federal Statistics Users' Conference have been announced by an organizing committee representing business, labor, agriculture, and professional research and educational groups. The purpose of the Conference will be to work with governmental agencies and Congress in developing and utilizing a long-range program of statistical information for mutual use.

SAACI Holds Two Social Events

H. D. Watson, chairman of the entertainment committee of the Salesmen's Assn. of the American Chemical Industry, has announced two major social events given by the organization. The annual SAACI dinner dance was held on November 16 at the Waldorf-Astoria Hotel. The annual Christmas party took place on December 12 at the same place.

Atom in Industry to be Topic of Conference

Commercializing the results of atomic research will be the topic of a special conference on nucleonics in industry to be conducted by the American Management Assn. in New York City on February 7-8.

P. R. Dreyer, Inc. Names Western States Representative

P. R. Dreyer, Inc., Chicago and New York, manufacturers of essential oils and aromatic chemicals, has appointed W. M. Gillies Co., Los Angeles, as Western States representative of Dreyer products and services. Headquarters are at 6399 Wilshire Boulevard, Los Angeles, with branch offices in other West Coast cities.

Paper Box Assn. Announces Annual Folding Carton Contest

The Folding Paper Box Assn. of America has announced plans for its twelfth annual folding carton competition. Entries will be received until December 31. Final judging will take place at Chicago during the annual meeting of the association, March 31-April 4, 1957.

TGA Issues Standards for Myristyl and Oleyl Alcohols

The Board of Standards of the Toilet Goods Assn., Inc., has issued Specification No. 64, October 31, 1956, which defines and establishes the standards of myristyl alcohol; and Specification No. 65, which provides the same data for oleyl alcohol.

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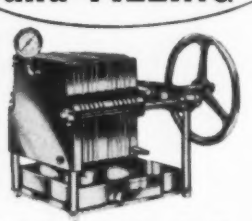
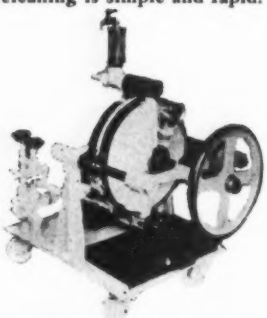


MODEL 8 ESS — Excellent for filtration of perfumes, essential oils and other liquids. Made from stainles steel either cast or rolled stock, precision machined and highly polished. Easy to set-up, screens can be removed quickly and cleaning is simple and rapid.



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SPOTLIGHT News...

The patent on Ban deodorant ball applicator owned by Bristol-Myers Co. has been upheld by the Federal District Court in Baltimore, Md. An injunction has been issued against Carter Products, Inc., preventing it from infringing on the patent with its Whirl-in Arrid applicator.

An untapped potential for new cosmetic products based on crystalline enzymes isolated from animal tissues is being developed by Norman Applezweig Associates. Hitherto the high cost of these crystalline enzymes has restricted their use to surgical debridement and anti-inflammatory agents. Now they are being developed on a large scale by Canada Packers, Ltd. for mass use products.

Vending Machines sell 20% of all packaged soft drinks according to the American Can Co.

Beauty and health aids pushed non-food sales in supermarkets and groceries to new sales heights in 1955. They jumped 17% to $90,000,000, says **Food Field Reporter and Food Topics.**

The cosmetic industry used 18 million pounds of sufractants in 1955 according to a survey by American Alcolac Corp.

Anatole Robbins will import a new mascara from Paris for the American market.

Royal jelly for cosmetics is being offered by the South African Assn. of Beekeepers, P.O. Box 3076, Johannesburg, S.A.

Revlon sales and profits for the first eight months of this year exceed the totals for all of 1955. Sales for the eight months came to $54,000,000. The net profit for the first half of the year was $3,800,000.

Turtle oil cream is being promoted by Up to Date Cosmetic Co. Turtle oil as an ingredient for cosmetics was first used in the early twenties but the vogue petered out.

Among U. S. families 41% get 70% of the total money income according to a survey by the Curtis Publishing Co.

Lipstick is no more of a luxury to women than shaving is to a man and should not be subjected to a cosmetic excise tax. Razor blades are tax free. This was the striking comment made by Miss Janet Myers as a representative of Cosmetic Career Women before a panel of the House Ways and Means Committee November 27. The committee is studying possible excise tax revisions. The excise tax of 10% on cosmetics is resented by women, Miss Myers stated, not only because of the financial burden which it places on their budgets but because it unjustly discriminates between men and women. Congressmen Mason held that necessities of many kinds are being taxed and therefore the argument that the tax should be eliminated because cosmetics are not luxuries is not well founded.

Dr. Andre F. Cournand, professor in the College of Physicians and Surgeons of Columbia University, is a brother of Edouard L. Cournand, president of Lanvin Parfums, Inc.

Colgate-Palmolive Co. world wide sales for the first nine months of this year were $382,927,000. In the same period of 1955 sales were $354,167,000.

Revlon Inc. common stock is to be traded on the New York Stock Exchange.

Over 1,200 attended the convention of the National Wholesale Druggists Assn. in Hollywood Beach, Florida last month. The 1957 convention will be held at the Americana-Balmoral hotels in Bal Harbour, Fla., October 26-31.

The population of the United States will be 179 million in 1960 and 220 million in 1975 if present population trends continue according to an exhaustive study by **Fortune** magazine.

Thirty cents out of every dollar spent in grocery stores went to 15 food store chains. A & P stores in 1955 topped the list with sales of $4,289,000,000.

Legislative sessions will be held by all states except three—Kentucky, Mississippi and Virginia—in 1957. The three may be called into special session. All legislatures to hold sessions will begin early in January, 1957 except Alabama and Louisiana which will convene in May.

Fair Trade has been killed in Utah by the state supreme court which ruled that fair trade contracts between manufacturers and retailers are actually price fixing, which is prohibited under the Utah constitution.

The merger of the Robert Gair Co. with Continental Can Co. was approved by stockholders October 26.

Colgate-Palmolive Co. is co-sponsor of a new half-hour comedy show on CBS television starting in January. Ida Lupino and Howard Duff will star in the series, which is called "Mr. Adams and Eve."

Visitors from Stockholm Tour Shulton Plant

Four members of the Stockholm, Sweden, Chamber of Commerce, who recently toured the United States, paid a visit to the Shulton, Inc., plant in Clifton, N.J. All were directly or indirectly connected with the perfume industry, and were particularly interested with the modern facilities and equipment of the Shulton installation.

ADACIOM Hears Talk by Internal Revenue Expert

The Associated Drug & Chemical Industries of Missouri (ADACIOM) was addressed on November 14 by Evan S. Lloyd, Assistant to the District Director of the U. S. Treasury Department, Internal Revenue Service. His subject was "Enforcement of the Internal Revenue Laws."

Mr. Lloyd spoke from a background of 21 years experience in various federal agencies, the last three of which were with the Internal Revenue Service.

Lambert-Hudnut in New Lititz, Pa., Plant

A multi-million dollar plant at Lititz, Pa., now houses the Lambert-Hudnut Division of the Warner-Lambert Pharmaceutical Co. Twenty-one products, including "Listerine" and "Quick," are manufactured there. The factory now employes some 350 men and women, with an increase to about 750 over the next two years anticipated.

Glass Container Manufacturers Meet in Phoenix, Arizona

The semi-annual meeting of the Glass Container Manufacturers Institute, Inc., an association of seventy-five manufacturers of glass containers, metal and moulded closures, was held in Phoenix, Arizona on November 12-15.

DCAT of Michigan Hears Election Post-mortem

Frank Angelo, managing editor of the Detroit Free Press, addressed the November meeting of the Chemical and Allied Industries Assn. of Michigan on "Post-mortems on the 1956 Presidential Election." His remarks were based on a lifetime career in journalism and of study of the national, political and economic scene.

Southwest Perfumer Reports On Popular Desert Odors

Yucca, prickly pear and pinyon, in that order, are the three most popular desert fragrances, reported Howard K. Foncanon, the world's first desert perfumer, in the December issue of Desert magazine. His New Mexicraft Co. fronts Albuquerque's 250-year-old Town Plaza. Since coming to New Mexico in 1947, Mr. Foncanon has originated such exotic scents as Midnight Cereus, Pinyon, Tamarisk, Sage, Desert Mistletoe, Ginger Blossom and Desert Jasmine.

The new plant of Procter & Gamble's Toilet Goods Division at Iowa City, Iowa is the second to be put in operation by the Division. More than four acres are enclosed under the roof of the plant, which produces P&G's entire line of toilet goods, including Gleem and Crest toothpastes, Drene and Shasta shampoos, and Lilt and Party Curl home permanents.

Agricultural Chemists Assn. Holds 70th Annual Meeting

The program of the seventieth annual meeting of the Association of Official Agricultural Chemists, Inc., held in Washington, D.C., October 15-17, included sessions on cosmetics and colors, and on the chemistry of foods and related fields.

On the morning of October 15 G. R. Clark presided over a program on "Cosmetics and Colors." P. W. Jewel discussed "Mascaras, Eyebrow Pencils and Eye Shadows." "Analysis of Nail Lacquers, III, Determination of Solvents and Camphor," was presented by S. H. Newburger, Marie A. Hall and J. H. Jones of the Food and Drug Administration. "General Referee Report" was given by G. R. Clark.

"Subsidiary Dyes in D&C Colors (Uranine in D&C Red No. 22)" was the subject of the talk by L. Koch, G. E. Leary and A. T. Schramm of the National Aniline Division, Allied Chemical and Dye Corp., reported on "Overoxidized Material in FD&C Blue No. 1." "Studies on Coal-Tar Colors, XXII, D&C Orange No. 5 and Subsidiary Colors," was the address given by C. Graichen and J. C. Molitor of the Food and Drug Administration. K. A. Freeman gave the "General Referee Report."

On October 17 Margarethe S. Oakley presided over a session at which spices and other condiments and preservatives and artificial sweeteners were among the topics. "Volatile Oil" was the subject of an address by N. A. Carson, J. E. Roe spoke on "Pungent Principles in Mustard," and E. C. Deal gave the "General Referee Report."

W. S. Cox spoke on "Artificial Sweeteners (Dulcin)" and J. B. Wilson on "Cyclamate Sodium." "Hydrogen Peroxide in Milk" was the topic of W. H. Munday. The "General Referee Report" was given by A. W. Breidenbach.

New Booklet on Glycerine Terms, Tests, Technical Data

"Glycerine—Terms, Tests, Technical Data," is a new booklet describing the commercial grades, definitions, specifications, test methods, and shipping and storage requirements of glycerine. It has been issued by the Glycerine Producers' Assn.

Grades covered include the following: U.S.P., 99% C.P., high gravity, dynamite, yellow distilled, saponification, and soap lye crude. Specifications covering classification, physical and chemical requirements, test procedures, packaging, storage and use are presented. Significant sections of British Standards for chemically pure, dynamite, soap lye crude and saponification crude glycerine are included.

The complete sodium periodate oxidation method, A.O.C.S. Official Method Ea 6-51, for the determination of glycerine, is described. The booklet also provides information on glycerine containers and shipping and the handling and storing of refined glycerine.

GCMI Exhibits Old Jars and Bottles

Glass containers in rare sizes, shapes and colors are featured in a collection now on permanent exhibition in the lobby of the New York headquarters of the Glass Container Manufacturers Institute. Assembled by Helen McKearin from the world-famous George S. McKearin collection of American bottles and flasks, the containers cover the period 1750-1900. Included are such interesting old-timers as a grandaddy of today's ketchup bottle.

OBITUARY

Joseph C. Ford

Joseph C. Ford, founder and president of the Celon Co., Madison, Wisc., died on October 19 after a brief illness.

PERSONALITIES

Dr. Charles H. Kline is the new scientific Director of Shulton, Inc. He will be responsible for the direction of the firm's over-all research program. Dr.

Dr. Charles H. Kline

Kline received his Doctor's Degree in chemistry from Princeton University. Prior to joining Shulton he has been associated with the Climax Molybdenum Co. and the General Electric Co.

Carl F. G. Meyer III was elected president of the National Wholesale Druggists' Assn. at its 82nd annual meeting in November in Hollywood, Fla. Mr.

Carl F. G. Meyer III

Meyer is the third generation and fourth of his family and firm to hold the office. He is president and general manager of Meyer Brothers Drug Co., wholesale druggists in St. Louis, New Orleans, Little Rock and Memphis.

Allen Diefenderfer, Jr. has been promoted to assistant regional sales manager of the Lehn & Fink division, Lehn & Fink Products Corp. He has been with the company since 1955 as a territorial representative in the Philadelphia and Pennsylvania area.

Maurice R. Chez, a vice president and director of Max Factor & Co., has retired effective December 1 for reasons of health. He had been with the Hollywood

Maurice R. Chez

firm for 29 years and was in charge of the United States sales division. Davis Factor, chairman of the board and general manager, will assume Mr. Chez's duties as director of the United States Sales Division.

Arthur I. Caplin has been promoted by Helene Curtis Industries, Inc. to Director of Marketing for the company's Beauty Salon Division. In his new assignment he will supervise the division's merchandising, sales promotion, advertising, sales education and similar activities.

Eric de Kolb, well-known industrial designer, and his organization have been appointed by Coty, Inc. to direct the design and art departments of the company. Mr. de Kolb has won wide acclaim in the industrial art field, receiving the Charles Welch Memorial Award in 1951 for his package designs for Gourielli Parfums and the Grand Award of the Folding Box Assn. in 1953.

Joseph Lynch, Pacific Coast Borax Co., reported from Spain in November that he was enjoying a ten-day stay in Barcelona, where he was spending time on the sea and also visiting his firm's Barcelona plant.

Ben S. Cottle, Jr. has been appointed to the sales staff of Givaudan-Delawanna, Inc., and its associate companies, Givaudan Flavors, Inc., and Sindar Corp., and will represent the firms in the Northern New Jersey area.

John V. Kilheffer, Jr., has been added to the research staff of Emery Industries, Inc., Cincinnati.

Frank Spitaleri, well known perfumer, has joined Perry Bros. He holds a B.S. degree in chemistry, and has been active in the Cooper Union Alumni. He is a

Frank Spitaleri

charter member of the American Society of Perfumers, a fellow in the American Institute of Chemists, and a member of the Society of Cosmetic Chemists. He is also the author of numerous technical articles and reports which have been published in various trade journals.

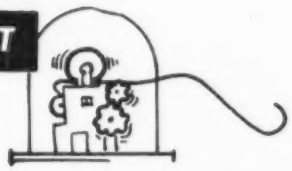
Alden R. Ludlow, Jr., has been named Director of Sales for U.S. Indus-

Alden R. Ludlow, Jr.

trial Chemicals Co., Division of National Distillers Products Corp., succeeding Lee A. Keane who has retired. Mr. Ludlow will be in charge of U.S.I.'s nation-wide sales organization with responsibility for the company's sales of alcohol, heavy chemicals, solvents and other products.

Dr. Valdemar H. Madis has been elected vice-president in charge of research, production, and quality control of Meer Corp., importer and processor of botanical drugs, gums and extracts.

MARKET REPORT



Sales are Estimated Ahead of Those Last Year . . .

THE call for oils, aromatic chemicals and other basic materials for Christmas holiday goods, particularly for toiletries and proprietaries, over the past month was expected to lift this year's volume well over the movement noted for the year 1955. Until December books are closed however and it will not be possible to determine the extent of the gains over last year. In some consumer outlets, December sales at the retail level constitute approximately twenty per cent of the total year's turnover. Based on reports, however, sales in the first ten months of this year have been running at about ten per cent ahead of last year.

PRICE CHANGES

Advances	Current	Previous
Tallow, fancy	0.08	0.07¾
Beeswax, crude	0.72	0.68
Oil nutmeg	$13.50	$10.25
Oil wormseed	$4.50	$3.90
Oil pineneedle, Siberian	$4.50	$3.75
Gum styrax, Asiatic	0.80	0.75
Oil bois de rose	$3.85	$3.35
Oil garlic, Egyptian, oz.	$4.75	$3.75
Oil citronella, Formosan	$1.50	$1.30
Cocoa butter	0.62	0.58
Castor oil—		
No. 1, tanks	0.21½	0.19½
Brazilian	0.20¼	0.18¼
Declines		
Menthol, racemic, USP	$4.75	$4.95
Geraniol—		
Extra	$3.80	$3.95
Soap grade	$2.40	$2.55
Vanilla beans, Bourbons	$7.50	$8.00
Oil palmarosa	$8.25	$8.50
Sodium lauryl sulfate, tanks	0.18	0.18½
Caranauba wax, NC 3, crude	0.65	0.71

Prices per pound unless otherwise specified.

NUTMEG SOARS—

Prices on oil nutmeg are steadily advancing with the market reaching a new high of $13.50 per pound. The new and higher price for the oil is based on the abnormally high cost of distillers grade nutmeg of 95 cents per pound. Indications are that both the spice as well as the oil will continue to rise in price although some houses point out that they are already experiencing considerable buyer resistance to the high levels. The sharply higher prices stem from the destructive storms that hit the British West Indies last year. It will take several years to replace the vast number of trees lost by the storms.

WORMSEED STRONGER—

While a reasonably good quantity of oil was carried over from last year's crop, it will not be large enough to offset the smaller crop just completed. Actually the carryover plus this year's crop is about 75 per cent of the total amount of oil that normally is produced, it is said.

BEESWAX AT NEW HIGH—

A good demand in the face of the blockade of the Suez Canal forced prices on all grades of beeswax, bleachable and non-bleachable, to record high levels for the last few years. Advices from West Africa stated that the crop was short and prices from South America were firm and high as the result of generally reduced supplies.

MENTHOL SUPPLY GAINS—

The dock tieup and the tense international situation failed to have any marked influence on menthol prices. With increasing quantities of synthetic material coming into the market it is generally believed that a greater degree of stability will prevail in this commodity in the future. This is in sharp contrast to the violent fluctuations that have marked menthol in the past, particularly with respect to the natural products from Japan and Brazil. A newer type of racemic synthetic menthol is said to be derived from the wood of the Southern pine. It is selling at $4.75 per pound in contrast to $6.50 per pound for the natural product imported from Brazil and $6.35 to $6.40 per pound for synthetic laevo material made here from Formosan citronella oil.

VANILLA BEAN DEMAND GAINS—

It is becoming increasingly apparent that consumption of vanilla beans is on the upgrade for the first time in the past several years. Strangely, vanilla extract consumption has been steadily increasing in recent years, but the demand for beans, up until this year, has failed to reflect such increases. During the period January 1 to October 1, 1956 vanilla bean imports reached 550 tons whereas only 430 tons had been imported into the United States in the full year 1955.

CITRUS OILS ACTIVE—

Demand for citrus oils has been holding up in reasonably good volume. For many years the soft drink business had proved a highly seasonal affair but is becoming increasingly apparent that the use of citrus oils in the beverage field is becoming fairly constant throughout the year. Independent producers of Californian orange oil suddenly boosted their price from 60 cents a pound to $1.50 as the result of the higher prices prevailing on Exchange Brand orange oil, but toward the close of last month independently produced oils were again offered close to or at about the old figure of 60 cents. Lime oil was marked by a strong tone with replacement costs suggesting a further rise in prices.

GLYCERIN IGNORES WORLD EVENTS—

The glycerin market failed to be affected by the swift moving developments in the Middle East. The position is entirely different from that existing some years ago when the United States was dependent upon foreign sources of supply. Output of synthetic material has been steadily increasing to the point where stocks have reached a high level of around 65 million pounds. In World War II, glycerin being classified as a strategic material, was watched very closely. Real concern was expressed at that time when stocks got below 50 million pounds.

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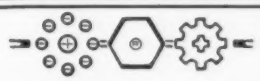
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